user manual

MapSight

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MapSight OS version 5.25 (Jan 2014)
MS-101-14-07-3.2

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About this User Manual

This User Manual provides a combined reference for the use of MapSight OS and its associated features on MapSight products and Windows Mobile 6 operating system that is pre-installed on these devices.

Note: *This document has been optimized for A5 booklet printing. Any blank pages are intentionally inserted to allow ideal back-to-back printing or relevant pages.*

Notes on Text:

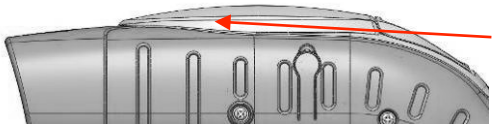
WARNING! **Text set off in this manner indicates that failure to follow directions could result in user injury or unexpected data results.**

CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

Note: *Text set off in this manner (with the finger indicator) indicates information that may be useful to the operation of your MapSight unit.*

WARNING! This device contains an eye safe Class 1 laser product. Invisible laser radiation is emitted from (and received into) the front apertures. Avoid staring into the laser beam. This product complies with 21CFR1040.10 and IEC60825-1:200.

WARNING! The MapSight unit contains a magnetic compass. Using the unit near magnetic (e.g. objects containing ferrous substances) or electromagnetic fields (e.g. electrical wires) may cause the compass bearing to be inaccurate.



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Introduction

Introduction

Welcome to MapSight

Thank you for purchasing MapSight. Your MapSight unit is a location-based measurement device that integrates a digital camera, compass, laser rangefinder, mobile computer, and precision GPS. This hardware combination makes the MapSight a powerful measuring device.

The MapSight is capable of in-field measurements, assisted with augmented reality instructions and back office measurements performed straight from and MapSight photos.

For additional information in regards to unit/warranty registration, tutorial videos and software downloads visit www.gemapsight.com/support

Getting Started

What's in the box?

Your GE MapSight kit will come with the selected colored MapSight unit with a number of 'Essential' and 'Field' accessories.

Item	Description
Unit	MapSight unit in Grey or Orange rubber protective trim
Documentation Pack	User documentation and resources
Essential Accessories	Refer **Essential Accessories** below
Field Accessories	Refer **Field Accessories** below
GPS+	GPS+ Positional Accuracy Enhancement
MapSight View	MapSight View desktop software

Essential Accessories

All MapSight kits are provided with a number of 'Essential Accessories'.

Item	Description
Battery	Used to power the MapSight unit.
AC Charger and Multi-Country plug set	Multi-voltage wall charger with set of four international (US, Europe, UK and Australasia) interchangeable plugs.
SD Card (fitted)	SD Card fitted to the MapSight unit. Can be removed/swapped-out by unscrewing the SD Card access cover.
USB Cable	Cable to allow transfer of data between MapSight unit and Windows-based PC.
Stylus and Handstrap	Stylus to allow accurate selection/tapping of on-screen buttons Handstrap to allow safe grip of the MapSight unit.
Screen Protector	Recommended additional protection for the LCD screen. Packed in 'Documentation Pack'

Field Accessories

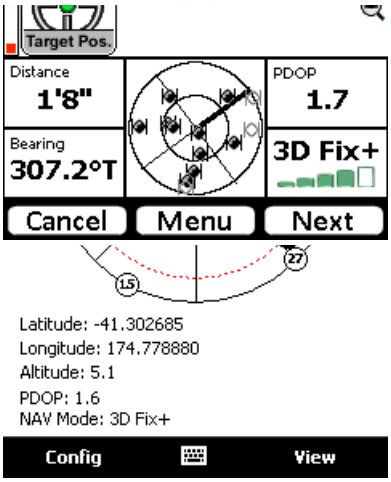
Also supplied are a number of additional 'Field Accessories' to enhance the use of your Mapsight device in the field.

Item	Description
Hardcase	Protective hard plastic case with custom-cut foam fittings for MapSight Essential and Field accessories
Softcase	Canvas cover to provide additional protection to the MapSight unit. Also includes shoulder strap
Spare Battery	Additional Battery
Travel Charger	Charger adaptor to allow batteries to be charged independently of the MapSight unit
Vehicle Charger Cable	Power cable to allow either MapSight unit or Travel Charger to be powered from a standard vehicle 'cigarette lighter'/accessory power socket
Glare Shield	Viewing loupe to reduce glare by shield the LCD from sunlight. Also includes an in-built focusing ring.
Tripod	Low magnetic signature tripod and carry case

GPS+

The GPS+ option enhances the position by refining the outputs of the GPS instrument to increase the accuracy of the position of the MapSight unit.

When operating, GPS+ appends a **+** symbol and reception indicator to the targeting preview screen GPS status.



The **+** symbol is also added to NAV Mode: in the GPS information utility

MapSight View

The MapSight View software allows you to build custom forms that allow capture of data that that suits your day-to-day field collection needs. MapSight View also allows you to measure the height and width of objects such as utility poles.

MapSight View allows MapSight Tools to be used together in custom workflows to capture readings for the objects you are targeting. Combined with the ability to add custom forms, MapSight View can create powerful workflows to allow consistent day-to-day data collection for any required job.

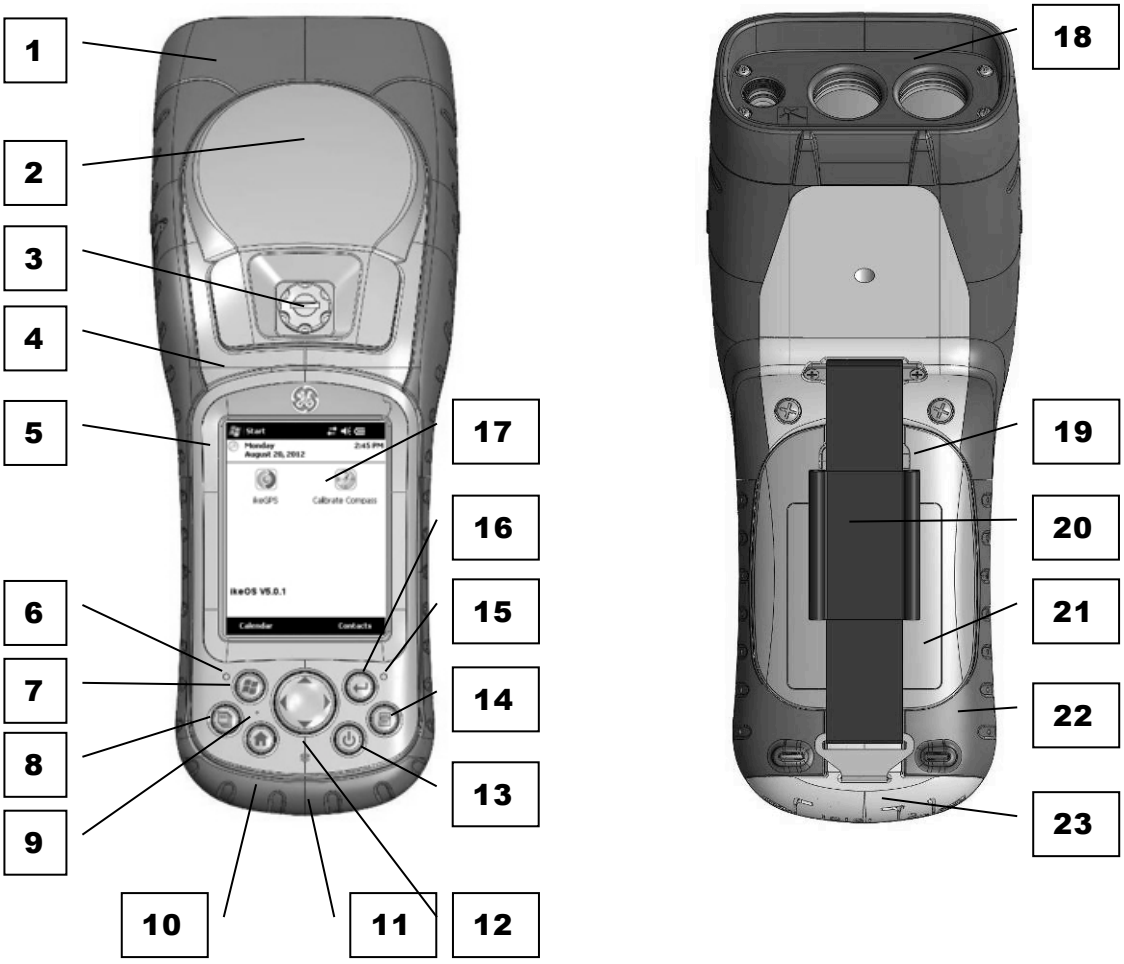
More details on the MapSight View software can be found in the MapSight View User Manual.

An example configuration of a MapSight kit is depicted below.

Anatomy of the MapSight unit

This section illustrates the different parts of MapSight.

1 Elastomer overmold
2 GPS Receiver and Antenna
3 Removable SD Card Slot Cover
4 Magnesium case front
5 MapSight model bezel label
6 Charge indicator (red LED)
7 Start menu button *
8 Task Manager button *
9 Microphone
10 Today screen button *
11 Speaker
12 Four-way directional button
13 Power button
14 Context menu button *
15 Notification indicator (green LED)
16 Enter button
17 Touchscreen/LCD display
18 Laser 'Reference Plane' – distance measured from this surface
19 Battery door latch
20 Hand strap
21 Battery door
22 Body molding
23 Connector Protector



* Buttons 7, 8, 10 & 14 may be reprogrammed for alternate functions depending on application being used.

24 Digital Camera

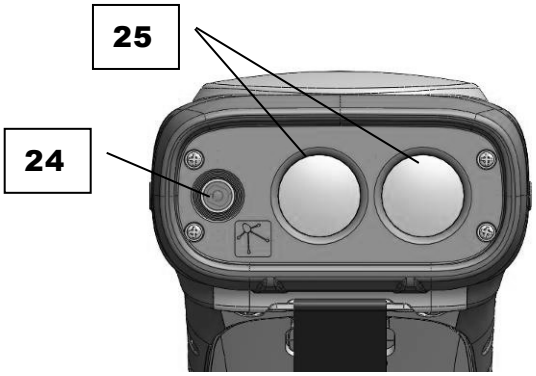
25 Laser Distance Range Finder
This Laser Distance Range Finder is an eye safe Class 1 laser product which emits invisible laser radiation from the front apertures. Avoid staring into the laser beam.

26 USB Client (mini B)

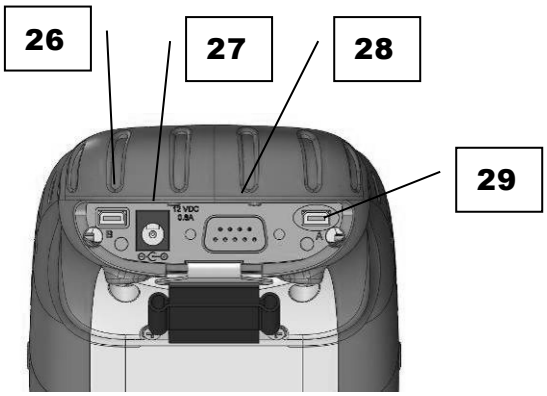
27 12V DC jack

28 9-pin serial port

29 USB Host (mini A)



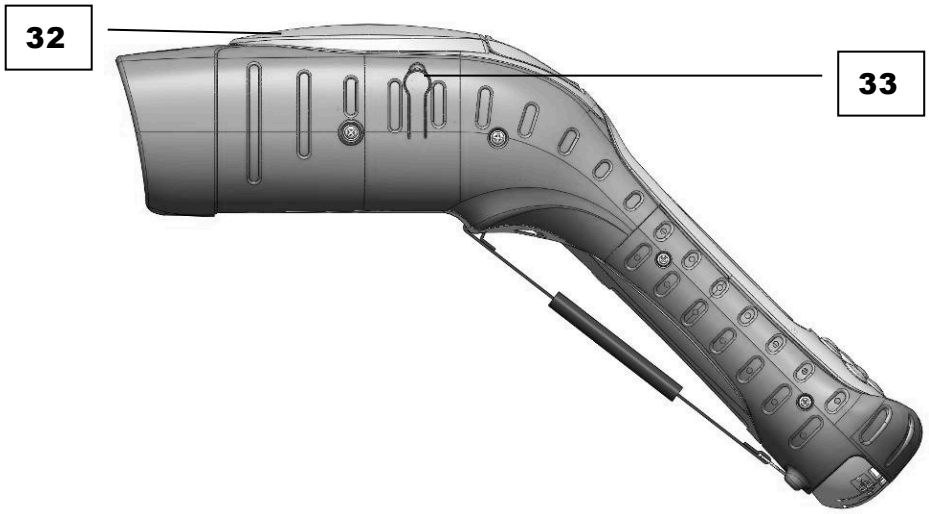
Front - Data capture module



Rear - Communications module

32 3D Compass
As MapSight contains a magnetic compass, using the unit near magnetic or electromagnetic fields may cause the compass bearing to be inaccurate.

32 External Antenna Port



MapSight Software and Licensing

All MapSight units running the MapSight OS v5 software require a license applied to access the on-board MapSight Tools as part of the MapSight application. New MapSight units are pre-licensed, prior to shipping, to shipping to ensure correct licensing is applied to the purchased MapSight package.

Licensing controls access to MapSight Tools and the ability to access functionality of additional MapSight enhancements and desktop software.

Additional licensing may be required for MapSight Tools that are not provided as part of the standard MapSight configuration. More information about MapSight options and the solution-specific MapSight Tools is available from your MapSight reseller.

Turning your MapSight on for the first time

To use your MapSight unit, you need to insert the battery and charge the unit for first use.

Remove the MapSight unit from its hardcase.

Turn the MapSight unit over and unhook the connector protector and handstrap and fold away from the battery cover.

Unlock the battery cover by sliding the lock to the right.

Remove the battery cover

Note: *You will need to open the protective softcase's Velcro flaps to access the battery cover.*

Place the battery into the battery cavity

Replace and secure (slide the lock to the left) the battery cover

Refit the handstrap and connector protector

Fit the plug that is applicable to your operating region to the AC charger.

Your AC charger comes with interchangeable plugs for USA, UK, Europe and Australasia.

Connect the AC charger to the wall socket. (Turn the wall socket on)

Connect the charger power tip to the MapSight power socket.

The red power/charge LED should light/blink if power is correctly applied

The MapSight unit may automatically power on. If it does not, press the power button to turn the unit on.

Allow the MapSight unit to fully power up past any start-up screens and on to the MapSight home screen

Home screen and control buttons

Whenever you reset your MapSight unit or return to the Home screen

Home screen

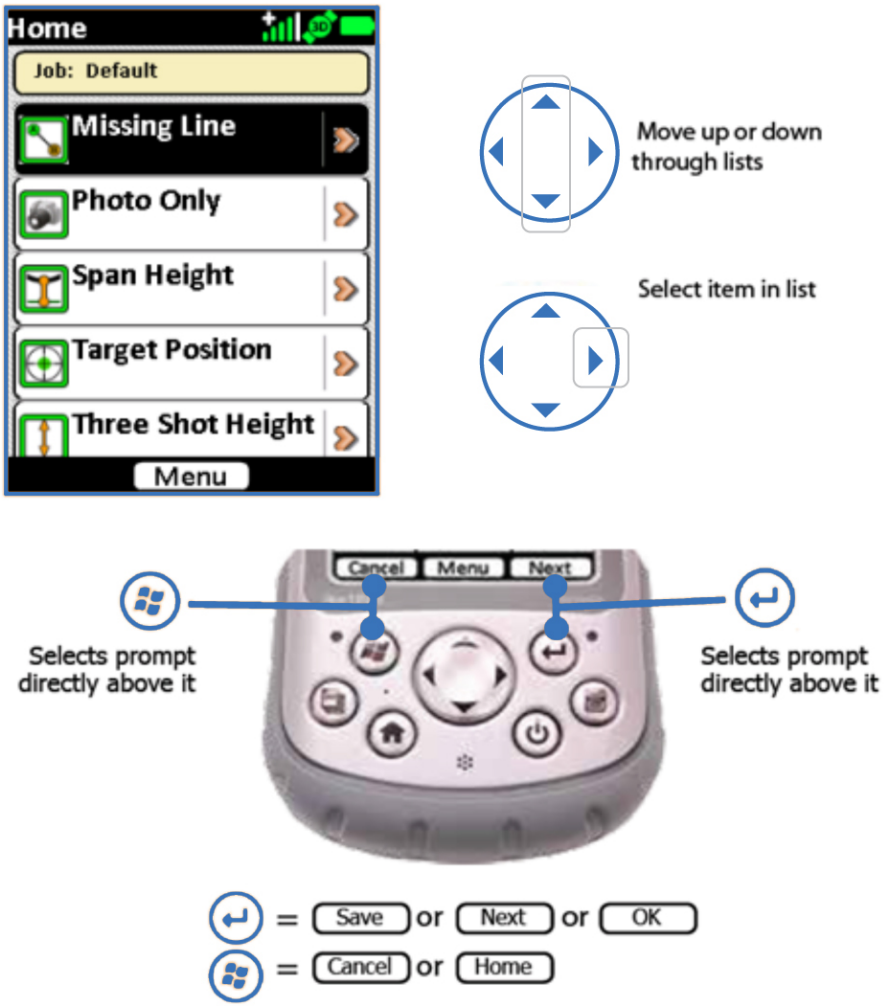
To top bar of the Home screen provides access to the Start menu and contains icons notifying the status of system settings.

Tapping the [Start] button accesses the start menu and underlying options.

The center part of the Home screen contains the touch buttons to access MapSight applications and tools, e.g. MapSight and Calibrate Compass.

The lower part of the screen contains soft-key buttons to access common Windows Mobile functions.

Screen Control Buttons



Before field use

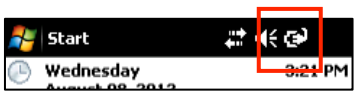
Once you have fully charged your MapSight unit we recommend that you fully charge the battery and calibrate the compass to fine-tine the compass for your local operating area.

Installing and charging the battery

New batteries should always be fully charged in your MapSight units to ensure that they are conditioned for optimal capacity.

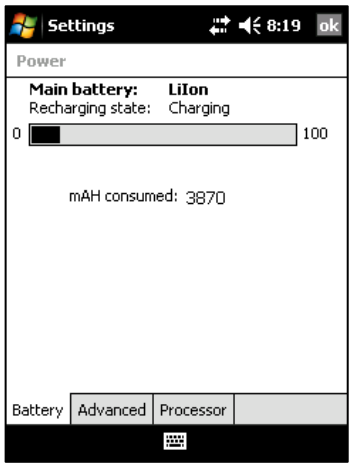
Charging batteries in the MapSight unit ensure that their internal capacity gauge is correctly calibrated to reflect the correct capacity of the battery.

With the battery securely in place, and external power applied, tap the power icon (top-right of the Home screen) to access the Power settings.



On the 'Battery' tab, the charge status of the battery is indicated as follows:

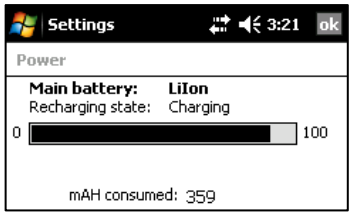
- The charge bar (0 to 100) indicates the level of charge. The closer to 100 the fuller the charge
- The 'mAH consumed:' value indicates how much capacity is still to be charged. The lower the number the fuller the charge.



The red power/charge LED will blink if the unit is charging.

If the power/charge LED stop blinking this indicates that the charge level is around 98%.

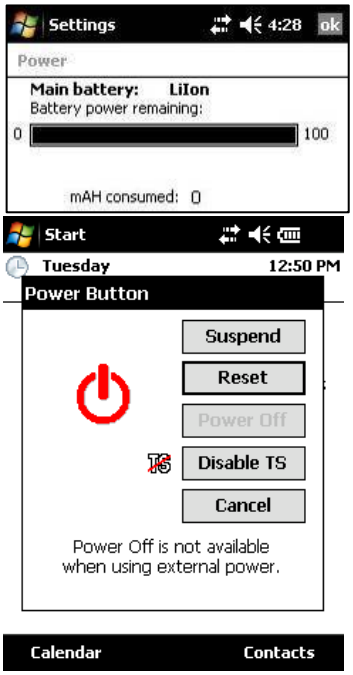
The 'mAH consumed:' value may slowly decrease as the battery capacity is calibrated for optimal use.



Once the charge indicator (red LED) stops blinking and the 'mAH consumed:' value stops decreasing then the battery has been fully charged.

For fully-charged new batteries the 'mAH consumed:' value will be near zero. For older batteries the 'mAH consumed:' may be above zero due to natural charge/discharge cycle capacity degradation.

Press and hold the power button until the 'Power Button' options appear, and then tap the [Reset] option. Resetting the MapSight unit will reset the battery capacity



Allow the MapSight unit to fully power up past any start up screens and return to the MapSight home screen.

If you have purchased/received any additional/spare batteries with your MapSight unit/kit, please repeat the above process to ensure that the correct capacity levels are set.

Suspend the MapSight unit by pressing once on the Power button. This should cause the LCD screen to dim.

WARNING! Changing batteries should only be performed when the unit is suspended or disconnected from external power.

Similar to the **Turning your MapSight on for the first time** instructions, replace the battery by:

- releasing the lock,
- remove the battery cover
- remove the existing battery
- fit the new uncharged battery
- replace and relock the battery cover.

Un-suspend the MapSight unit by pressing once on the Power button. This should cause the LCD screen to return to the last screen.

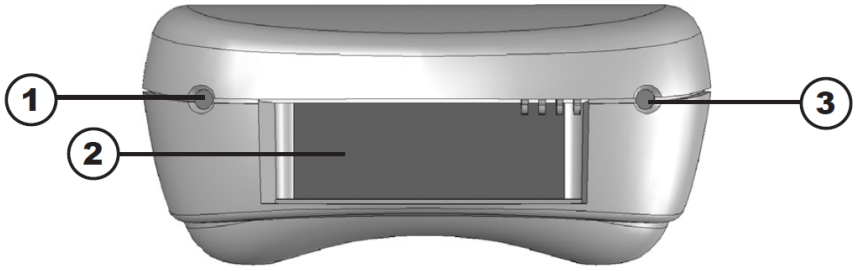
Fully charge the new battery using the previous steps to monitor the charge status until fully charged.

Travel Charger

The Travel Charger is an item, provided with MapSight kits, that lets you charge a spare battery pack on the go. Use it in your vehicle or in your office so you always have a charged battery pack.

It is strongly recommended that all new batteries are initially fully charged in the MapSight unit ensure that their internal capacity gauge is correctly calibrated to reflect the correct capacity of the battery. After this initial full charge they can then be charged in the Travel Charger.

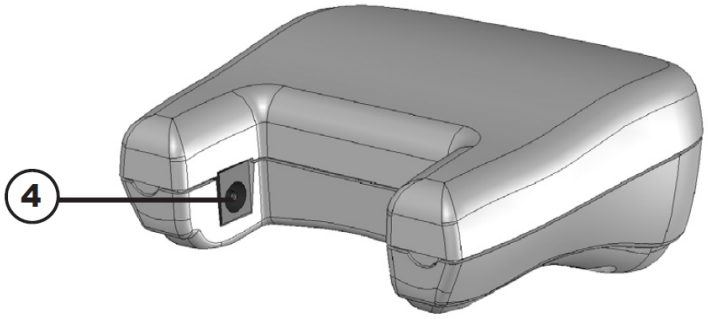
Device Features



1. *Charge status LED.* Signals for the LED are explained below.

LED Signal	Meaning
Red	Battery pack is charging.
Green	Battery pack charge is complete.
Amber	Error in charge on battery pack.

2. *Battery charge compartment.*
3. *Power indicator LED.* The green light signals power.



4. *Rear power connector.* Use the wall charger that came with your Field PC or the cigarette lighter adapter.

CAUTION: Only use authorized devices with the Travel Charger. Failure to do so may damage your device and void your warranty.

Charging Time
Charge a discharged battery pack from 4 to 6 hours or until the charge indicator LED turns green to indicate full charge.

Charging temperatures
Only charge your battery pack in temperatures between 32°F and 113°F (0°C and 45°C). For best results, charge the battery pack at room temperature (68°F or 20°C).

WARNING! Misusing the battery pack may cause it to overheat, rupture, or ignite and cause serious injury. Be sure to follow these safety rules:

- Do not heat the battery pack or place it in fire or direct sunshine.
- Do not install the battery pack backwards.
- Do not connect the battery terminals with any metal object (such as wire). Do not solder onto the battery pack.
- Do not disassemble or modify the battery pack.
- In the rare event that the battery pack leaks and fluid gets into the eye, do not rub the eye. Rinse well with water and immediately seek medical care. Your MapSight will naturally pick up a magnetic signature over time that may affect the accuracy

Compass calibration

Once you have fully charged your MapSight unit we recommend that you calibrate the compass to fine-tune the compass for your local operating area.

The 'Calibrate Compass' utility guides the user through an in-field compass calibration process. A video showing this process can be found at http://www.youtube.com/watch?v=KzxRBk9EjhI.

Why you should calibrate

Your MapSight will naturally pick up a magnetic signature over time that may affect the accuracy of the internal digital compass.

To maintain optimum performance, a Compass Calibration application is provided on your MapSight that will guide you through the steps required to measure and compensate for this magnetic signature.

When you should calibrate

You should recalibrate the compass when you first use the device and whenever your MapSight has travelled a long distance (e.g. plane flights or shipping to a new location). To ensure the highest possible compass accuracy, it is recommended that the MapSight be calibrated at least once per month.

Where you should calibrate

The Compass Calibration application should be used in a clean magnetic free environment. This means:

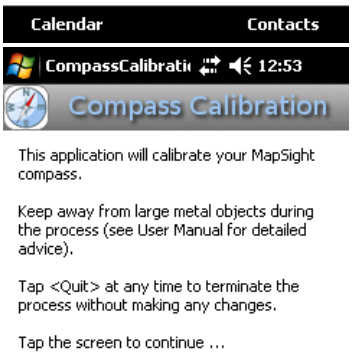
- Keep away from large metal objects (e.g. cars, steel poles, desk frames, filing cabinets etc.).
- Avoid wearing metallic objects (e.g. large metal watches etc.).
- Keep clear of electric wires, transformers, and other electronic devices that may generate a magnetic field.
- In general, for any metallic object, position the MapSight unit at least twice its longest dimension away from the object (e.g. keep at least twice the distance of the length of a 3 meter car, approximately 6 meter. Smaller metal objects have significant less impact).
- Keep other magnetic objects away (e.g. sighting compasses / magnetic toys etc.).

The calibration may be performed indoors, but be aware of the cautions above. The ideal location to perform the operation would be in the middle of a field away from any man-made structures.

How to calibrate

- To start the calibration process, tap the 'Calibrate Compass' icon on the main screen.

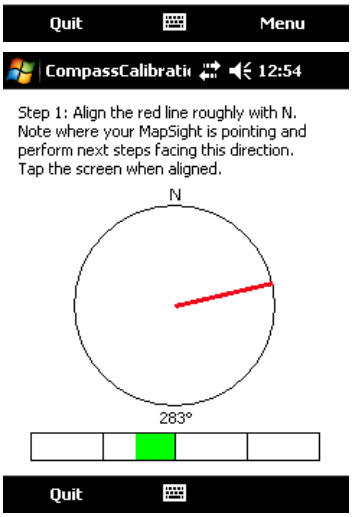
- Review the 'Compass Calibration' welcome screen, and tap the screen to continue.


Calendar
Contacts
CompassCalibrati
12:53
Compass Calibration
This application will calibrate your MapSight compass.
Keep away from large metal objects during the process (see User Manual for detailed advice).
Tap <Quit> at any time to terminate the process without making any changes.
Tap the screen to continue ...

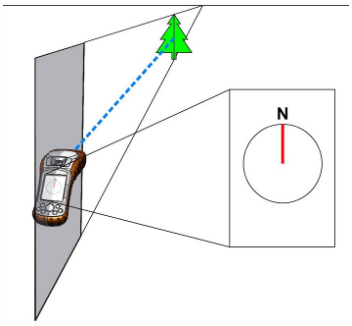
Step 1 – North Orientation

- At the align screen, move your MapSight until the red line is best aligned with the N.

Note: *The bar indicator at the bottom of the screen will move into the green zone when correctly aligned.*



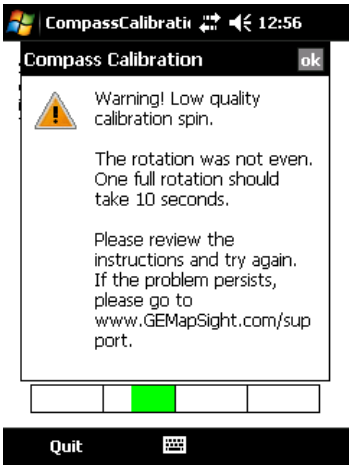
- Note the direction that the MapSight is facing (e.g. identify a recognizable object / landmark in this direction).
- During the steps on the following pages, try to keep the front section of the MapSight aligned with your reference direction as shown.
- Tap the screen to continue.



- In the rotation screen, review the video which illustrates the movement required
  - *The videos are taken from the user's perspective when facing in the reference direction.*
  - *Note that the movements required for the compass calibration may take a couple of attempts to master. Don't worry if you get it wrong, the calibration application will prompt you to repeat any step that was not completed correctly.*
  - *Aim to be halfway through the rotation when the count gets to 5.*
  - *For each rotation, the key is to keep the MapSight aligned with the reference direction as shown.*

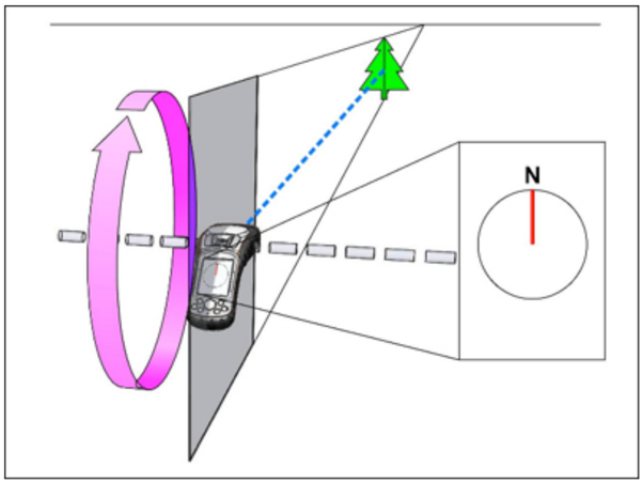
CompassCalibrati 12:55
Step 2: Rotate your MapSight once as shown over 10 seconds. A tone will sound if it is incorrectly aligned.
Tap the screen when ready to start.
Quit

- When you are ready, tap the screen to start.
- You will be given a countdown 'Ready, Set, Go' and a 10 second count will begin for each required rotation.
- Rotate your MapSight smoothly in the manner shown during the 10 second count, maintaining alignment with the direction reference noted earlier.
- If you move too far from alignment you will be warned with a tone. The faster the tone beeps, the further the MapSight is from the correct alignment. Use the bar indicator on the bottom of the screen to help guide you back to the correct alignment.
- Once the 10 second count has finished, the data collected will be assessed for alignment and rotational quality.
- If the Compass Calibration was not rotated evenly through one complete revolution, the error *"The rotation was not even. One full rotation should take 10 seconds."* will be displayed.


CompassCalibrati 12:56
Compass Calibration
ok
Warning! Low quality calibration spin.
The rotation was not even. One full rotation should take 10 seconds.
Please review the instructions and try again. If the problem persists, please go to www.GEMapSight.com/support.
Quit

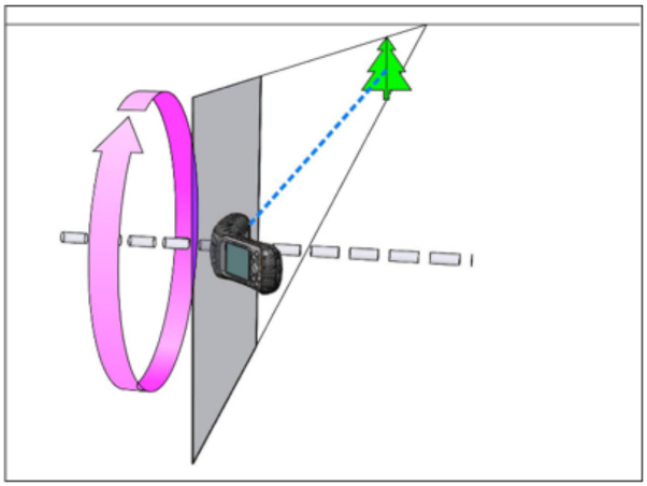
- Repeat the process for each of the three required orientations.

Step 2 – Rotation Orientation 1



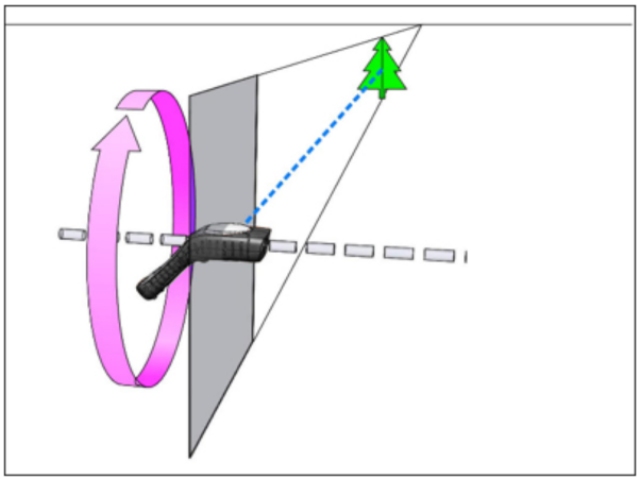
CompassCalibratio 1:10
Step 2: Rotate your MapSight once as shown over 10 seconds. A tone will sound if it is incorrectly aligned.
Tap the screen when ready to start.
Quit

Step 3 – Rotation Orientation 2



CompassCalibratio 1:04
Step 3: Rotate your MapSight once as shown over 10 seconds. A tone will sound if it is incorrectly aligned.
Tap the screen when ready to start.
Quit

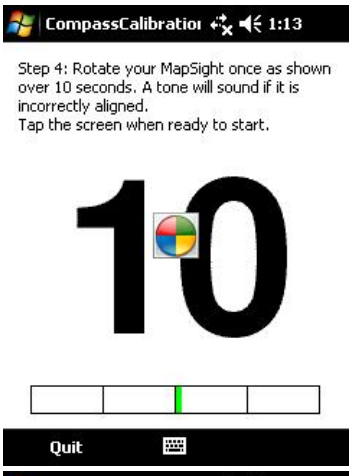
Step 4 – Rotation Orientation 3



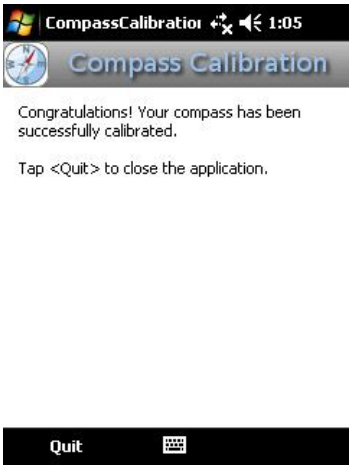
CompassCalibratio 1:05
Step 4: Rotate your MapSight once as shown over 10 seconds. A tone will sound if it is incorrectly aligned.
Tap the screen when ready to start.
Quit

- Once you have successfully completed the three rotations, new compass calibration parameters will be calculated and stored.

  Note: *During the calculation phase the display will show the final countdown time and this on-screen cursor will change to the 'working' cursor.*


CompassCalibratio 1:13
Step 4: Rotate your MapSight once as shown over 10 seconds. A tone will sound if it is incorrectly aligned.
Tap the screen when ready to start.
10
Quit

- A summary will be presented indicating that the process is complete.
- Tap 'Quit' to close the Compass Calibration application.



MapSight Data Capture Application

MapSight Application

MapSight Tools

Data Transfer to Desktop

MapSight Data Capture Application

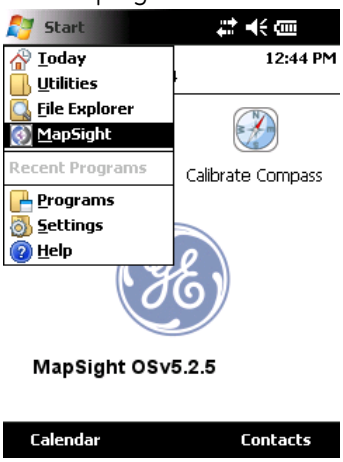
The MapSight application provides access to the MapSight Tools data capture modes. All MapSight units have MapSight installed, but MapSight Tools are accessible dependent on product license purchased.

Starting the MapSight application

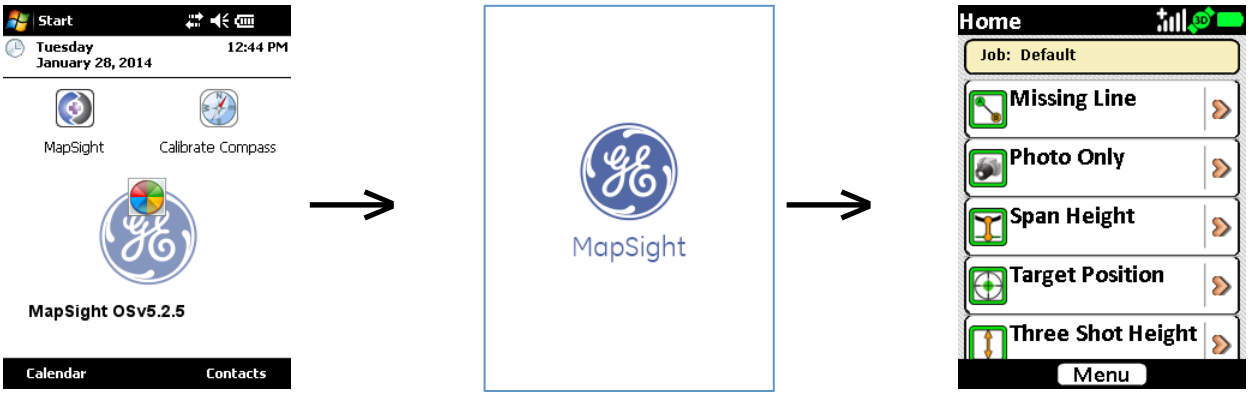
To start the MapSight application either tap the MapSight icon on the main Home screen, or from the Start menu

Launch MapSight from Home screen

Launch MapSight from Start menu



The MapSight application will start and progress through the startup screen on to the **Home** screen with a list of MapSight Tools.



MapSight Home screen

The Home screen is split into four areas:

1. Status

The top of the screen will show the screen name and any applicable status icons. In the top-right corner, the GPS icons will indicate the GPS signal and the battery icon will indicate the charge status (or remaining life) of the battery.

2. Job Name

The current job name will show below the status icons

3. MapSight Tools and Custom Forms

The scrollable list of MapSight Tools and/or custom forms will show in the main part of the screen.

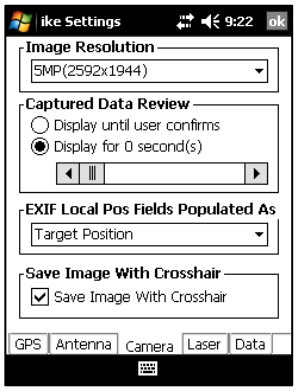
4. Action Buttons

At the bottom of the screen action buttons will show. Buttons will differ depending on the options relevant to the on-screen display.

Viewing and changing the Settings

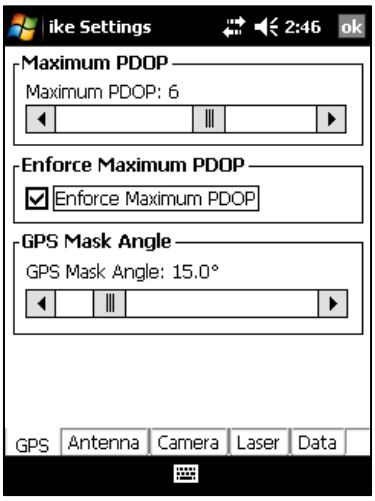
On the Home screen tap the [Menu] button to display the available options.
Tap the settings icon to access the 'MapSight Settings' options.

On any of the 'MapSight Settings' tabs, tapping the [ok] button (in the top-right corner) will save the selected settings and return to the previous screen



GPS Settings

This screen allows you to view and change the settings that affect how MapSight operates with GPS satellites.



GPS Position Dilution of Precision (PDOP) value is a measure of the overall accuracy of the current position. The lower this value is then the more accurate your GPS position is likely to be. A value of 100.0 is displayed on the targeting preview screen when PDOP cannot be calculated.

Maximum PDOP value slider

If the current PDOP reading is above the GPS **Maximum PDOP** setting, a warning will be shown on the capture preview screen by the display of an orange border around the PDOP reading. The **Maximum PDOP** setting can be adjusted by sliding the level to the left or right to lower or increase the **Maximum PDOP**. The default **Maximum PDOP** value is 6. A lower value may result in more accurate the fix, but this may increase the time to get a fix. A higher Maximum PDOP may reduce the time to get a fix, but will likely decrease the accuracy of the fix.

Enforce Maximum PDOP checkbox

When **Enforce Maximum PDOP** is enabled, data capture will not be possible if the GPS readings exceed the **Maximum PDOP**. If **Enforce Maximum PDOP** is unchecked, then an orange border will still show around the on-screen PDOP value but positional readings can be taken if the maximum is exceeded.

WARNING! If **Enforce Maximum PDOP** is unchecked, positional detail of MapSight and target readings is may be less accurate.

GPS Mask Angle value slider

The GPS Mask Angle default is set to 15°. Even if they are visible, satellites that are at a lower elevation than the GPS mask angle will not be used to calculate position. The **GPS Mask Angle** can be adjusted by moving the slider bar left or right.

SBAS drop-down options

Hardware Revision Two MapSight units

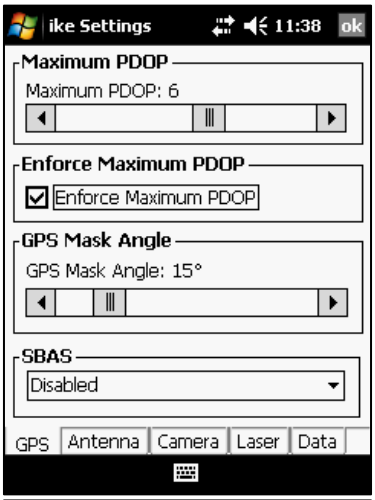
Hardware Revision Two users can select their SBAS system from the following options:

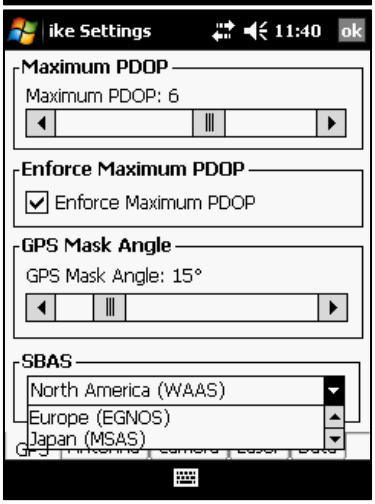
- Disabled
- North America (WAAS)
- Europe (EGNOS)
- Japan (MSAS)
- India (GAGAN)

WARNING! Selecting the wrong SBAS system will make the GPS less accurate. Anyone outside the regions specified should set the SBAS option to 'Disabled'.

Hardware Revision One MapSight units

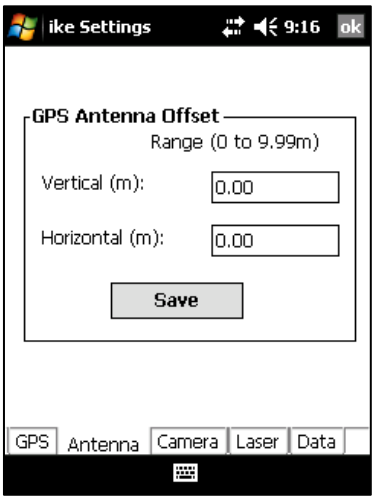
This setting is not required Hardware Revision One MapSight units as it is handled automatically.





Antenna Settings

This screen allows you to view and change the value settings in relation to using MapSight used with an external antenna.

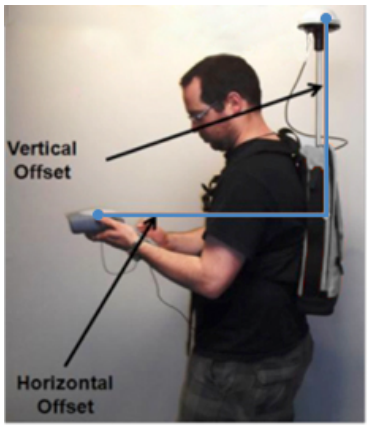


The GPS Antenna Offset is used in conjunction with a fixed-position external antenna (on a pole or backpack) connected to the MapSight units external antenna port.

- The 'Vertical (m):' value is the distance above the MapSight unit that a connected external antenna is located.
- The 'Horizontal (m):' value is the distance to behind the MapSight unit that a connected external antenna is located.

Tapping the [Save] button stores the Vertical and Horizontal values to memory and adjusts GPS location and Laser range calculations accordingly.

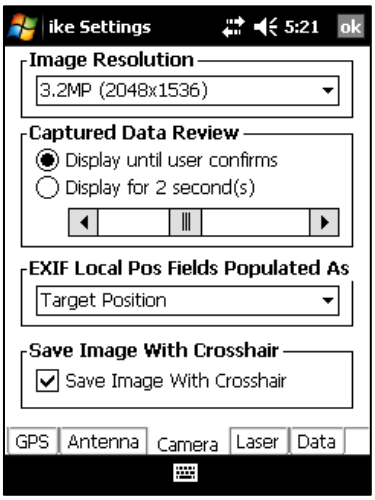
WARNING! When an external antenna is not connected to the MapSight unit the GPS Antenna Offset Vertical and Horizontal values should always be saved as 0.00
This example shows an external antenna mounted on a backpack.



WARNING! To ensure best accuracy, it is not recommended that a connected external antenna be secured forward or beneath the MapSight unit. The Vertical offset should always be above the MapSight unit, and the Horizontal offset should always be behind the MapSight unit.

Camera Settings

This screen allows you to view and change the settings for the photos taken with MapSight.



The **Image Resolution** drop-down list shows the number of megapixels to be used for each photo. A higher resolution will give more detailed photos, but take up more memory storage space. The number of options available on the Image Resolution list depends on the model of MapSight unit purchased. An Image Resolution of 3.2MP is selected by default.

Captured Data Review provides options for post-capture review; when the:

- '*Display until user confirms*' option is selected the photo review screen is presented until the user taps the [Save] button. When this option is selected, the 'Retry' option is also available from the Review screen to allow the user to discard the captured photo and retry the capture. This option is enabled by default.
- '*Display for X second(s)*' option is selected the photo review screen is presented, briefly while the photo is saved, then for the number of seconds selected on the slider. The display time-out ranges between 0 and 5 seconds.

EXIF Local Pos Fields Populated As options

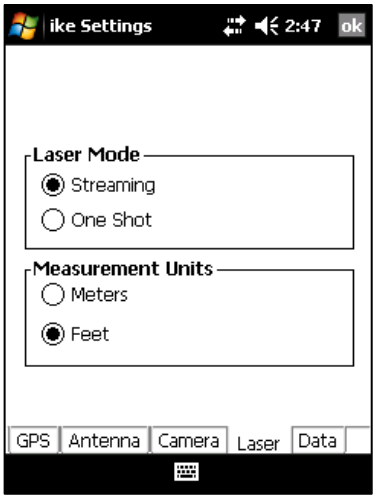
The Exchangeable Image File Format (EXIF) fields are pieces of information stored with each photo. These use the EXIF v2.2 standard format for digital photos, such as the time and date, but also include fields for target positional data which MapSight records. With each reading, MapSight records both the Local position (where your MapSight is physically located) and the Target position (the object that the crosshairs are targeting.) For some applications, such as Google Earth, it is useful to record the GPS coordinates for the target position in the EXIF Local Position field so that map icons will show where the object actually is, but have an attached picture that was taken from a distance. By default, MapSight sets this field to store the target position data.

WARNING! Where the EXIF Local Position field is set as 'Target Position' the EXIF will record the same value in the EXIF Latitude / Longitude and Destination Latitude / Longitude fields.

The **Save Image With Crosshair** checkbox is checked by default to allow presentation a crosshair on the captured target. If the Save Image With Crosshair is not checked, the photo does not save a crosshair on the target.

Laser Settings

This screen allows you to view and change the settings in relation to the way the laser rangefinder functions.



The **Laser Mode** options controls the selection between always on (Streaming) or single target (One Shot) mode.

- The 'Streaming' option is the default setting for where the laser is continually firing and providing a live range distance to target. This option is enabled by default.
- The 'One Shot' option causes the laser rangefinder to attempt to determine a distance only when the 'Capture' button is press. Where 'One Shot' Laser Mode has been selected, the capture preview Distance value will be shown as 'Single'.

WARNING! Regardless of which the Laser Mode is selected the laser rangefinder emits a pulse that may cause infrared transmission detectors (e.g. speed camera detectors) to be activated.

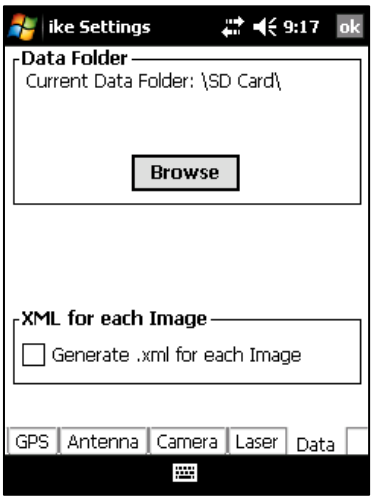
The **Measurement Units** option controls the selection between recording distance measurement units.

- 'Feet' option displays measured distance in feet and inches and records in decimal feet (e.g. displayed 4'6" will record as 4.5). This option is enabled by default.
- 'Meters' option displays and records measured distance in decimal meters.

The capture preview and review screens will present the measured range in the 'Distance' panel

Data Settings

This screen allows you to view and change the top-level **Data Folder** where MapSight stores its Job sub-folders. The default 'Current Data Folder:' directory is \SD Card\



Data Folder shows the '*Current Data Folder:*'

Tap the [Browse] button in the **Data Folder** box to show the directory browser dialog. Use the folder tree view to browse and select the required folder. Tap [Save] or [ok] to update the data folder, or tap [Cancel] to not change the 'Current Data Folder:'

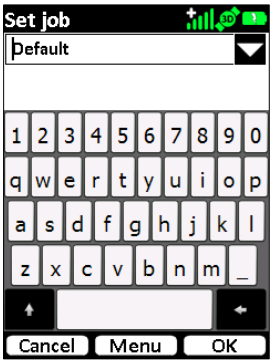
WARNING! The Data Folder path must be a valid existing folder on your MapSight unit to correctly record captured data.

Note: *While it is possible to store captured data in MapSight internal memory, it is recommended that data be stored on an inserted SD card.*

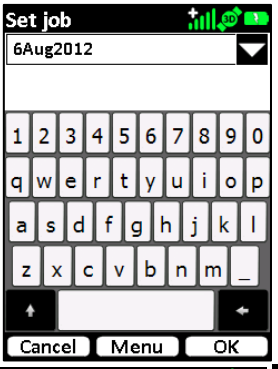
The **XML for each Image** setting allows the user to enable or disable the generation of an XML file for each photo captured. This option is not enabled by default.

Changing the 'Default' Job name

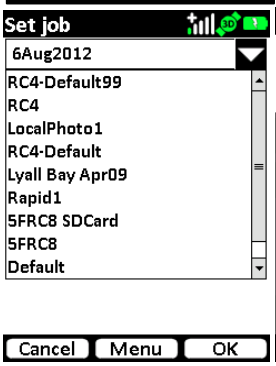
For new units the job name will be set as 'Default'.
As you may be operating in different areas it may be prudent to change the name of the job to reflect something more meaningful for the task.
Tap the current 'Job:' name to select and access the Set Job menu



The virtual keyboard will appear to allow data entry of a new job name.
Using the keyboard to enter an alpha-numeric description of the job.



Alternatively, a list of existing jobs can be shown by tapping the drop-down arrow to the right of current job name field.
Tapping an existing job name will update the job name to the selected job.



Once the correct job name is created, or selected, and tap the [OK] button to set the job.
Tapping the [Cancel] button will return to the Home screen.

The application will return to the Home screen and the **Job** name will be updated as selected.

Exiting the MapSight application

On the Home screen tap the [Menu] button to display the available options.
Tap the exit icon to close the MapSight application.

At the 'Exit MapSight?' confirmation, either tap [OK] to exit the application, or [Cancel] to return to the Home screen

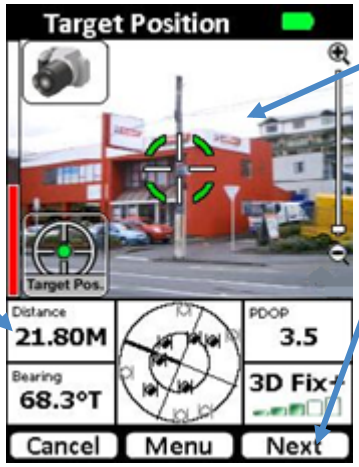
MapSight Tools

Introduction

MapSight Tools are easy-to-use data capture modes. The specific MapSight Tools enabled on a MapSight unit are restricted to those licensed for that individual MapSight unit.
The standard MapSight Tools have similar on-screen interfaces and start-to-finish workflows.

On-screen interface: Example data capture preview screen for Target Position

1. Status
The top of the screen shows the task name any any relevant icons (e.g. battery level).



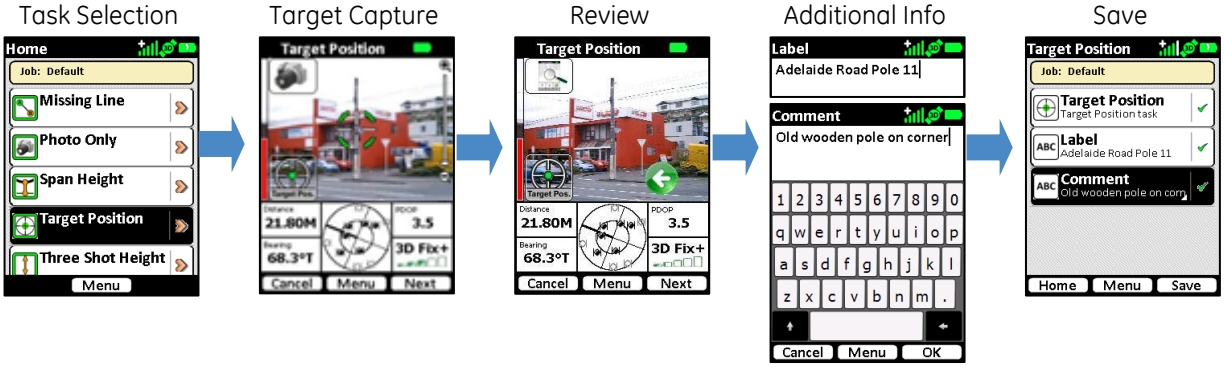
2. Video Preview
A streaming feed from the camera. Most MapSight Tools show a central crosshair to allow accuracte targetting of point-of-interest.

3. Instrument Readings
The lower section of the **screen** shows the instruments in use by the selected MapSight Tool.
Where any instrument does not **have** a useable reading a **red** border will appear around that reading.

4. Action Buttons
At the bottom of the screen action buttons will show. Buttons may differ depending on the options relevant to the on-screen display.

Distance: The laser rangefinder distance from the MapSight unit to the targetted object
Bearing: The Compass bearing from the the MapSight unit towards the targetted object. This initially displays a °M (**M**agentic) bearing, but as the GPS obtains a fix this will update to °T (**T**rue) to adjust for localised magnetic declination/variance.
GPS Skyplot: Shows an overhead view of detected GPS satellites. The black icons indicate satellites in use for you fix and the white icons indicate satellited available but not in use. The thicker black line indicates the direction to north.
GPS PDOP: Shows a measure of the overall accuracy of the current position. The lower the PDOP the greater the GPS positionmal accuracy is likey to be.
GPS Fix: This indicates the status of the GPS fix with respect to GPS coverage, PDOP and enabled MapSight functionality. If the GPS+ option is installed a **+** symbol will be appended to the fix indicator and a position quality graph will display.

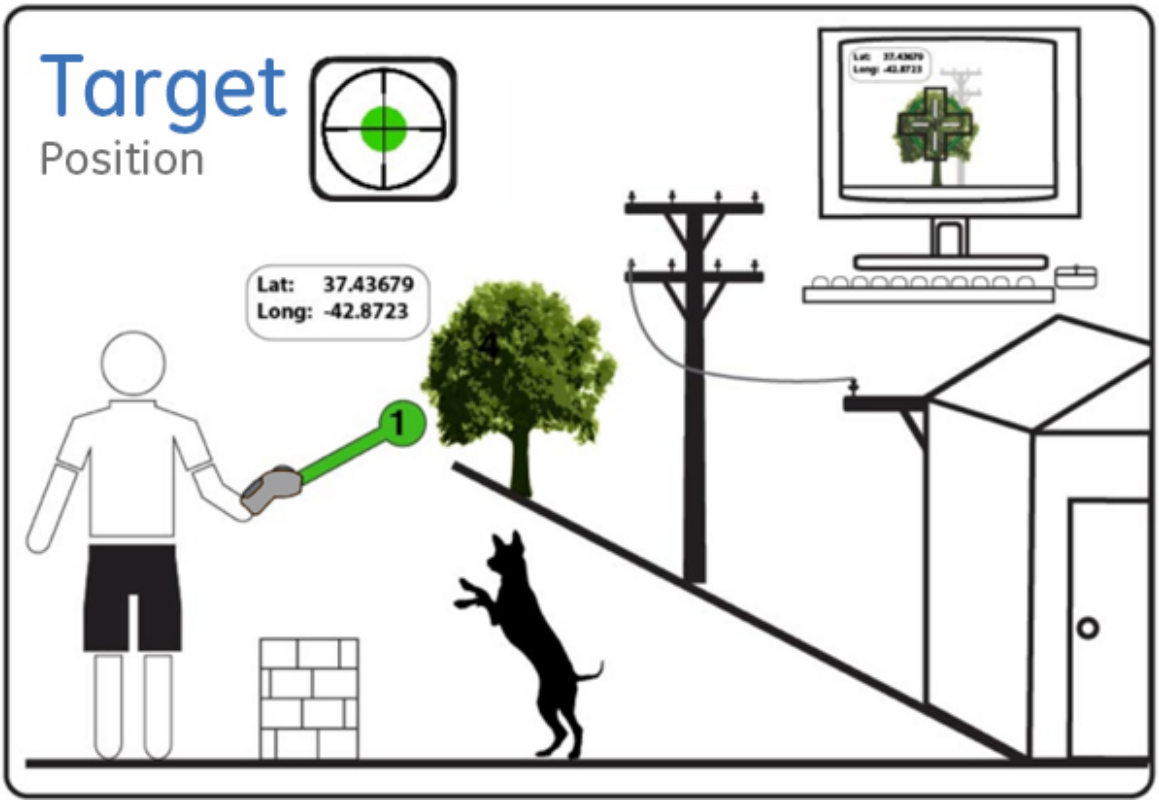
Workflow: Example workflow for Target Position MapSight Tool.



Target Position

Summary

Target Position is the workhorse of MapSight. Point MapSight at a remote object such as a tree, pole or building and capture its GPS location using the on-board GPS, laser range finder and compass. One shot and you're on to the next object. Target Position mode is the standard mode for capturing a single geo-referenced target and associated photo.



Step-by-step

Select the Target Position MapSight Tool from the Home menu

The default tasks for the Target Position MapSight Tool will be shown. A red star will indicate the mandatory tasks.

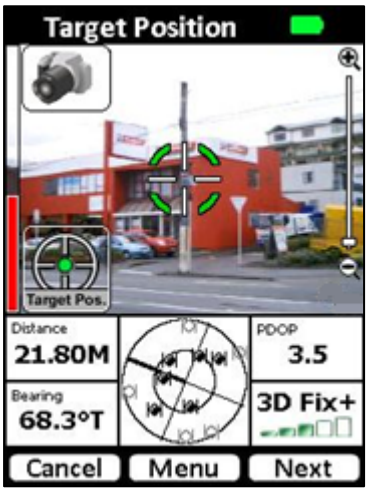
Tap the **Target Position** task to start the video preview screen

Move your MapSight until the crosshairs are centered on the target object you wish to capture data on.

Check that the PDOP and GPS Fix readings are good. The border around the instruments readouts will change in color depending on the quality of the reading.

- A red border will indicates that that reading is outside the limits of the instrument.
- An orange border indicates that the reading can be used, but there may have been manual adjustments made to allow capture outside the default recommended settings.

Hold the MapSight unit steady, ensure you're still on target and tap the Next button or capture soft key.



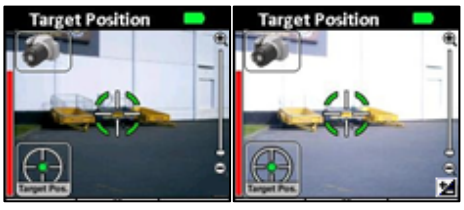
Exposure Control

If lighting conditions are an issue, use the Exposure increase / decrease buttons (Right or Left arrow keys) to either lighten or darken the target photo.

When the Right or Left arrow keys are pressed the Manual Exposure icon will appear in the bottom-right of the Camera Window.

Tapping the icon will return the Camera to Auto Exposure mode and the icon will disappear.

If the photo is too dark and the target cannot be distinguished, **press the Right key to lighten the photo.**



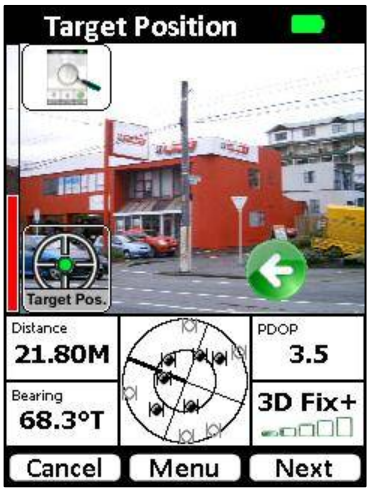
If the photo is too light and the target cannot be distinguished, **press the Left key to darken the photo.**

The camera will click, and depending on camera settings, will either show the review screen or revert to the Target Position task selection screen

With the review screen enabled the screen will display a static image of the target photo and the instrument time at time of capture. You can tap the:

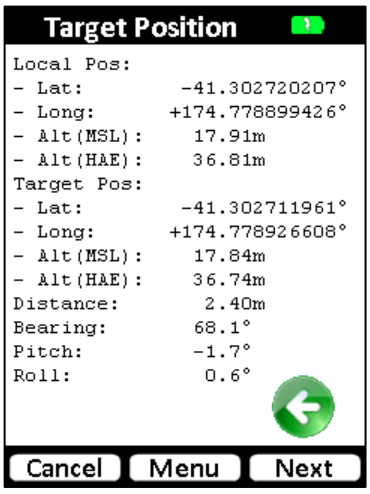
Information icon (top-left) to access geospatial data about the target

Green 'back' arrow (bottom-right) to retake the target. This will return to the preview screen.



The information screen will provide instrument readings in regards to the local (MapSight) position, target position and other instrument readings.

Tap the Next button to save the target and continue.



Where there is a successful recording a green tick will appear alongside the task.

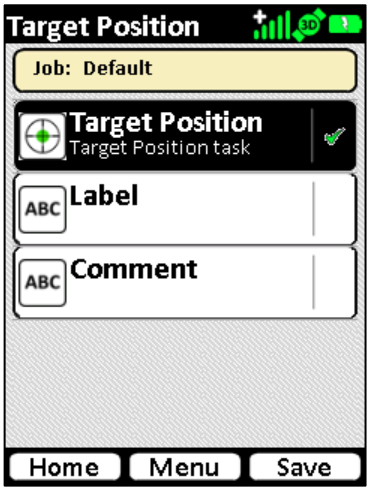
From here the information can be abandoned (tap the **Home** button), retaken (tap **Target Position** again to delete the photo and re-enter the video preview), and data entered into non-mandatory Label and Comment fields.

Tap the **Label** task button to enter the Label entry screen.

Tap the **Comment** task button to enter the Comment entry screen.

Tap the **Save** button to save the target without Label/Comments recorded and return to the Home screen.

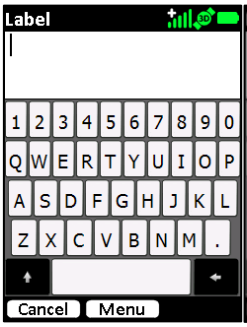
Tap the **Home** button to abandon the target and delete the recorded data.



On the Label screen, use the virtual keyboard to enter a short description of the target.

Tap the Cancel button to exit the Label entry

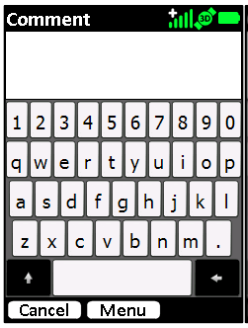
Tap the OK button to store the Label text.

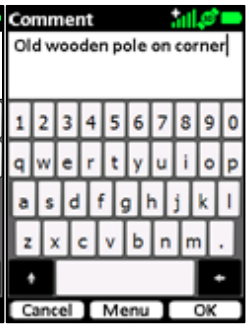


On the Comment screen, use the virtual keyboard to enter a more detailed description of the target.

Tap the Cancel button to exit the Comment entry

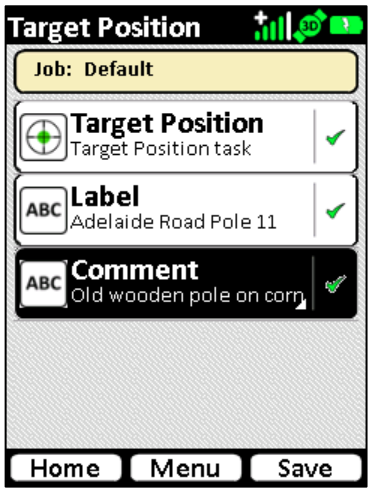
Tap the OK button to store the Comment text.





Once all information is correct, tap Save to save the target information.

Or tap Home to abandon the target and delete the recorded data.



The Target Position MapSight Tool will return to the Home menu

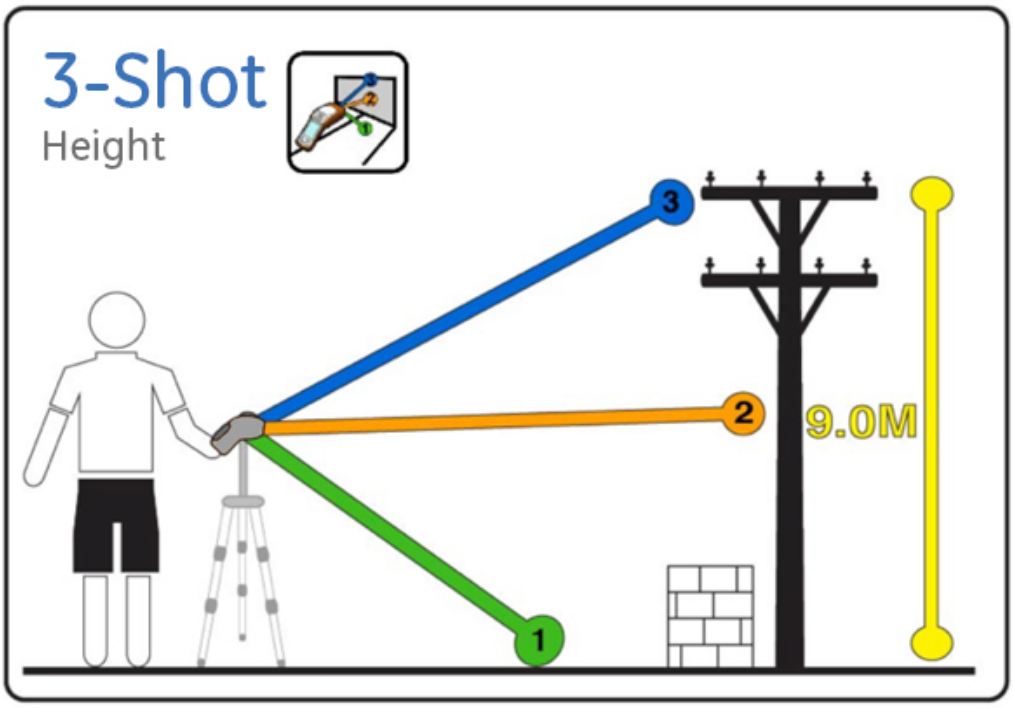
3-Shot Height

Summary

Directly measure the height of an object, such as a pole, from a remote position, even when the base of the object is obscured.

In 3-Shot Height mode, the user is guided through a series of steps to measure the vertical height of an object, where the base of the object is not necessarily visible.

When performing 3-Shot Height measurements, the use of a MapSight low magnetic signature tripod is strongly recommended as this will assist in minimizing potential error introduced due to changing the hand-held height of the MapSight during the measurement.

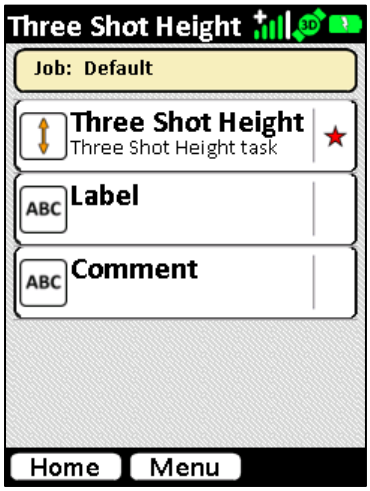


Step-by-step

Select the Three Shot Height MapSight Tool from the Home menu

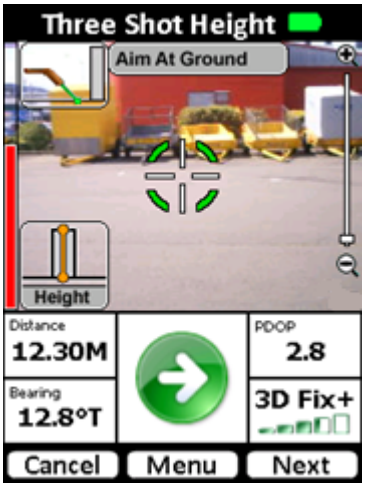
The default tasks for the Three Shot Height MapSight Tool will be shown. A red star will indicate the mandatory tasks.

Tap the **Three Shot Height** task to start the video preview screen



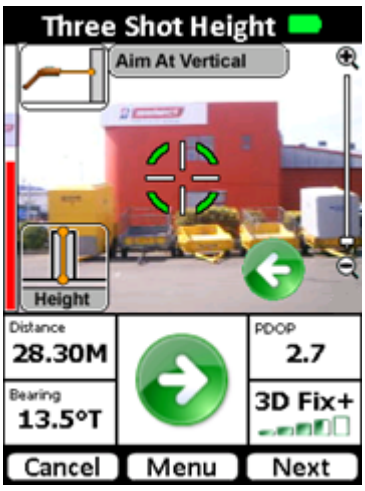
Aim at the ground in front of the object.

Aim at a level, flat area in front of the object to be measured and tap the Next button to proceed.



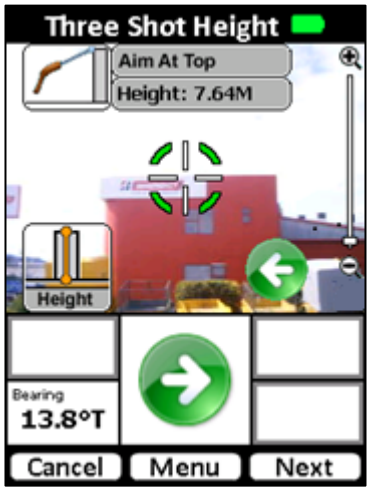
Aim at the vertical face of the object.

Tap the Next button to proceed or tap the Previous button to return to the previous step.



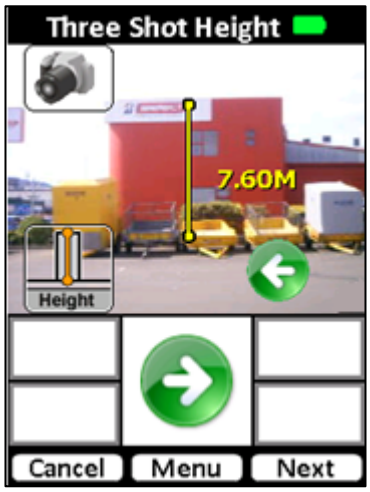
Aim at the top.

Tap the Next button to proceed or tap the Previous button to return to the previous step.



Take the photo. The measured height is overlaid on the photo.

Tap the Next button to capture the photo or tap the Previous button to return to the previous step.



The camera will click, and depending on camera settings, will revert to the Three Shot Height selection screen. Where there is a successful recording a green tick will appear alongside the task.

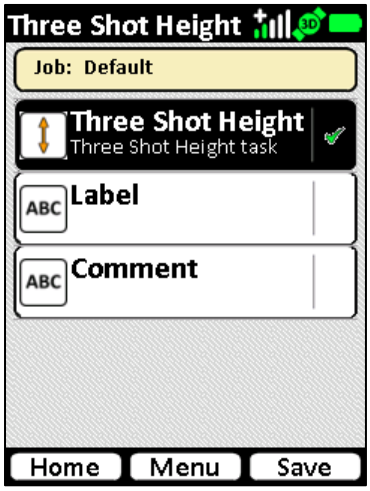
From here the information can be abandoned (tap the Home button), retaken (tap **Three Shot Height** again to delete the photo and re-enter the video preview), and data entered into non-mandatory Label and Comment fields.

Tap the **Label** task button to enter the Label entry screen.

Tap the **Comment** task button to enter the Comment entry screen.

Tap the **Save** button to save the target without Label/Comments recorded and return to the Home screen.

Tap the **Home** button to abandon the target and delete the recorded data.



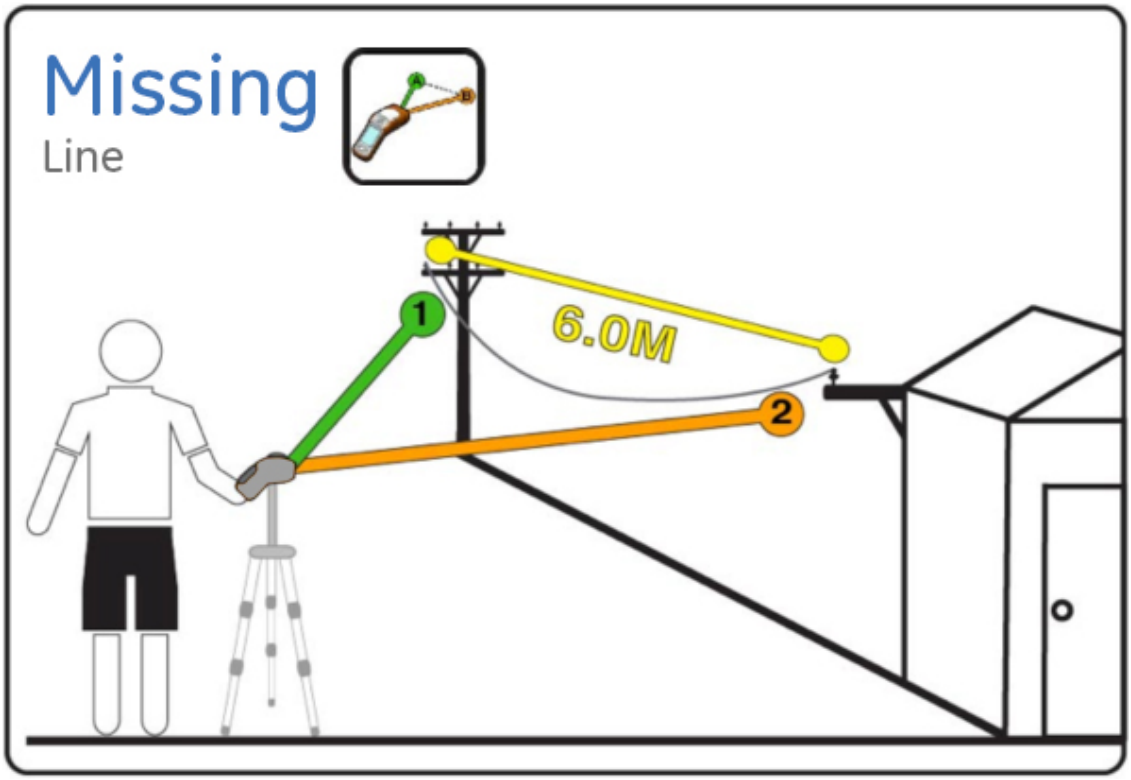
Refer to the **Target Position** MapSight Tool for instruction on adding Label and Comment

Missing Line

Summary

The Missing Line mode is used to calculate the horizontal distance between any two objects.

When performing Missing Line measurements, the use of a MapSight low magnetic signature tripod is strongly recommended as this will assist in minimizing potential error introduced due to changing the hand-held height of the MapSight during the measurement.

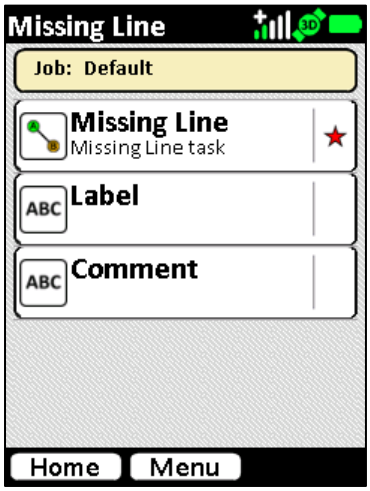


Step-by-step

Select the Missing MapSight Tool from the Home menu

The default tasks for the Missing Line MapSight Tool will be shown. A red star will indicate the mandatory tasks.

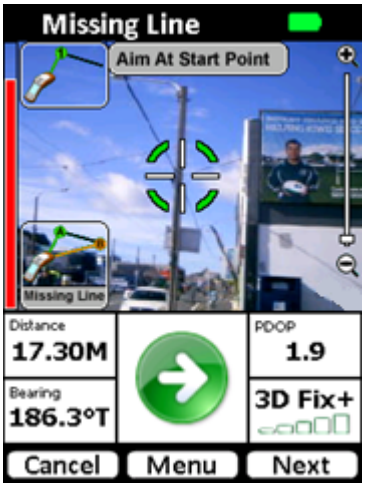
Tap the **Missing Line** task to start the video preview screen



Aim at the start point

Confirm your targeting

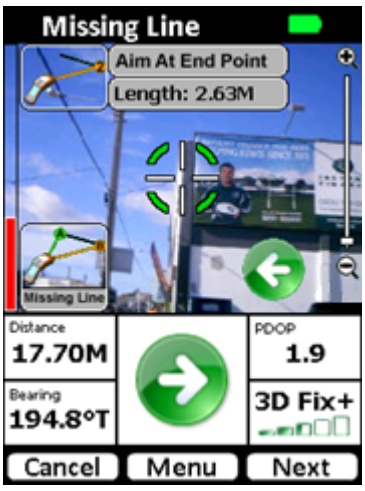
Tap Next



Aim at the end point

Confirm your targeting

Tap Next



Recompose the scene so that the superimposed line is in the center of the image.

Tap Next to continue.

The camera will click, and depending on camera settings, will revert to the Three Shot Height selection screen. Where there is a successful recording a green tick will appear alongside the task.

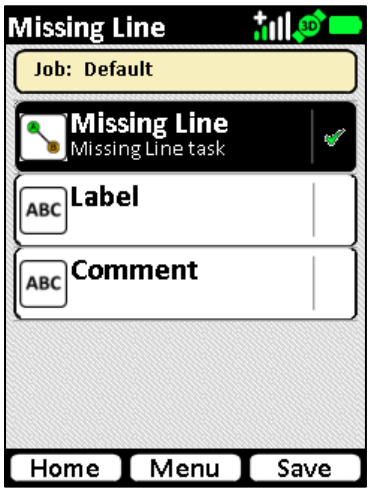
From here the information can be abandoned (tap the Home button), retaken (tap **Missing Line** again to delete the photo and re-enter the video preview), and data entered into non-mandatory Label and Comment fields.

Tap the **Label** task button to enter the Label entry screen.

Tap the **Comment** task button to enter the Comment entry screen.

Tap the **Save** button to save the target without Label/Comments recorded and return to the Home screen.

Tap the **Home** button to abandon the target and delete the recorded data.



Refer to the **Target Position** MapSight Tool for instruction on adding Label and Comment

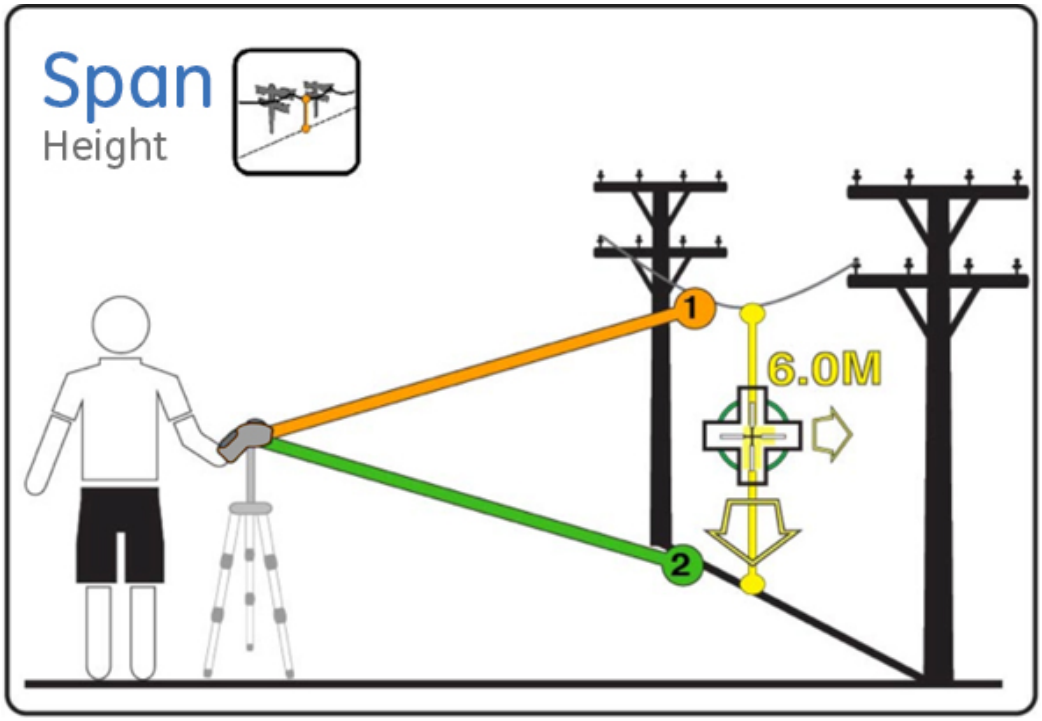
Span Height

Summary

In Span Height mode is used to calculate the vertical height above ground of a point on a span, for example the mid-span height of a cable or wire.

The user is guided through a series of steps to allow a measurement of the vertical distance between (for example) a suspended wire and the (reasonably level) ground below.

When performing span height measurements, the use of a MapSight low Magnetic Signature Tripod is strongly recommended as this will assist in minimizing potential error introduced due to changing the hand-held height of the MapSight during the measurement.

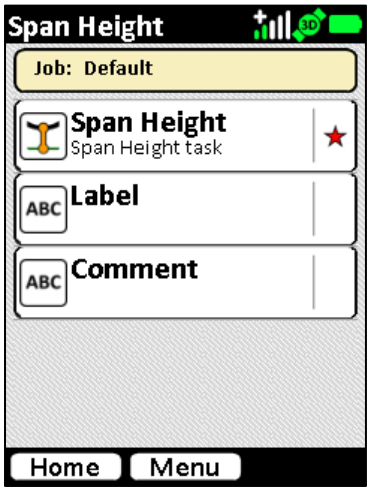


Step-by-step

Select the Span Height MapSight Tool from the Home menu

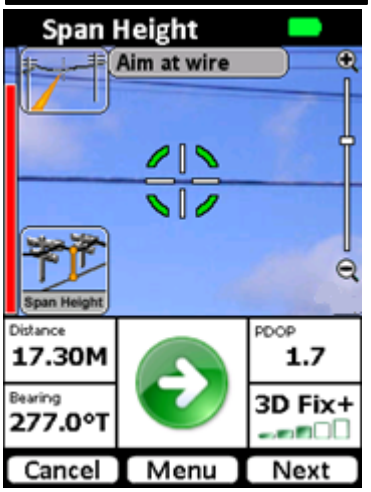
The default tasks for the Span Height MapSight Tool will be shown. A red star will indicate the mandatory tasks.

Tap the **Span Height** task to start the video preview screen



Aim at the wire. At this point in the process, your MapSight needs a valid GPS position, along with the angle and distance to the wire. Once these criteria are all satisfied, the Ready to capture indicator will turn green to indicate that it is OK to proceed. Tap the Next button when you are happy with the distance measurement.

Tip: The distance measured in this step is critical to obtaining a good height measurement. Observing the laser distance measurement at this point to ensure that you get the expected result will help to improve the overall accuracy.

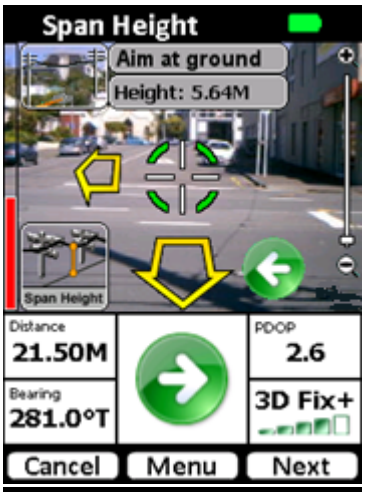


Aim at the ground. The on screen indicators will guide you to the spot directly below the Point of Interest on the wire.

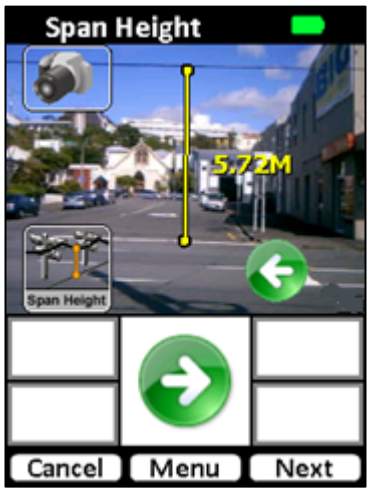
Follow the arrows until your MapSight is aimed at the point on the ground directly below the wire and the arrows disappear.

Once you are satisfied, Tap the Next button to continue.

Tip: If you are in a situation where you cannot see the point on the ground directly below the wire, you can aim at a point on the ground at the same height instead (only the vertical height will be used at this stage).



Recompose your scene with the measurement superimposed, and tap the Next button to finalize the measurement.



The camera will click, and depending on camera settings, will revert to the Span Height selection screen. Where there is a successful recording a green tick will appear alongside the task.

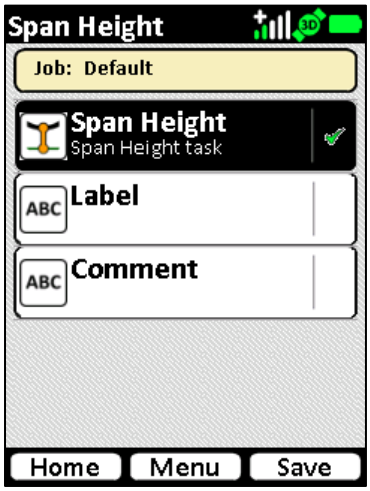
From here the target position information can be abandoned (tap the Home button), retaken (tap Span Height again to delete the photo and re-enter the video preview), and data entered into non-mandatory Label and Comment fields.

Tap the **Label** task button to enter the Label entry screen.

Tap the **Comment** task button to enter the Comment entry screen.

Tap the **Save** button to save the target without Label/Comments recorded.

Tap the **Home** button to abandon the target and delete the recorded data and return to the Home screen.

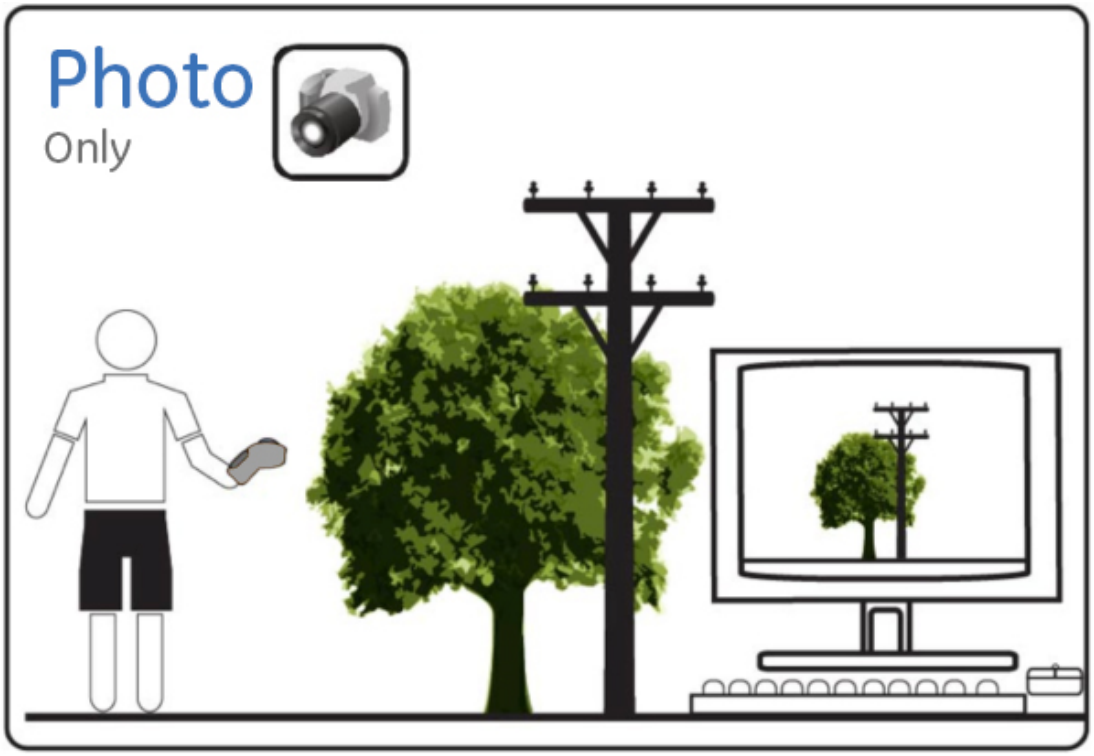


Refer to the **Target Position** MapSight Tool for instruction on adding Label and Comment

Photo Only

Summary

The Photo Only mode is used to capture a high resolution photo of an object. This is useful for documenting the conditions of located or measured objects, for identifying hazards for field crews and for including in assessments.

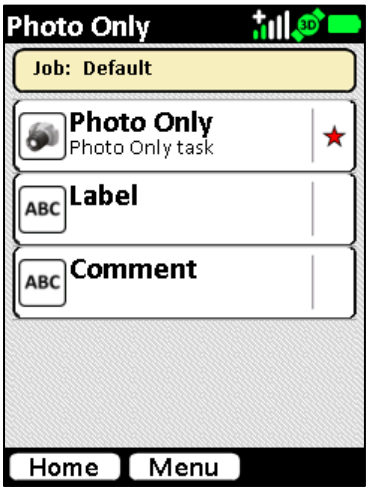


Step-by-step

Select the Photo Only MapSight Tool from the Home menu

The default tasks for the Photo Only MapSight Tool will be shown. A red star will indicate the mandatory tasks.

Tap the **Photo Only** task to start the video preview screen.



To use this mode, aim the MapSight to compose your scene as required.

Tap the Next button.

The camera will click, and depending on camera settings, will revert to the Photo Only selection screen. Where there is a successful recording a green tick will appear alongside the task.

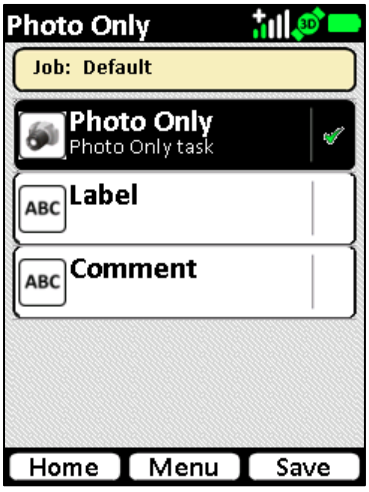
From here the information can be abandoned (tap the Home button), retaken (tap Photo Only again to delete the photo and re-enter the video preview), and data entered into non-mandatory Label and Comment fields.

Tap the **Label** task button to enter the Label entry screen.

Tap the **Comment** task button to enter the Comment entry screen.

Tap the **Save** button to save the target without Label/Comments recorded.

Tap the **Home** button to abandon the target and delete the recorded data.

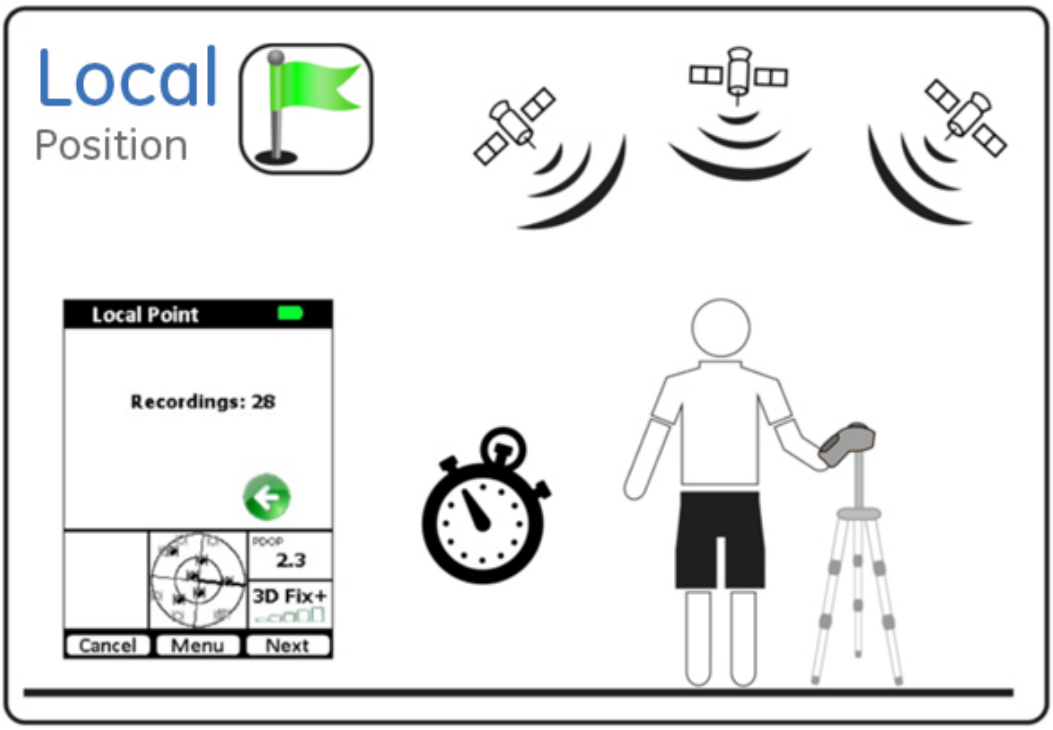


Refer to the **Target Position** MapSight Tool for instruction on adding Label and Comment

Local Point

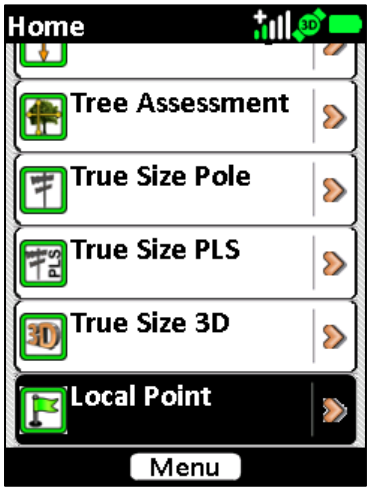
Summary:

This MapSight Tool is used to capture an average GPS position over a series of 30 readings. When used with a custom MapSight View form, the number of GPS readings can be adjusted to suit data collection requirements.



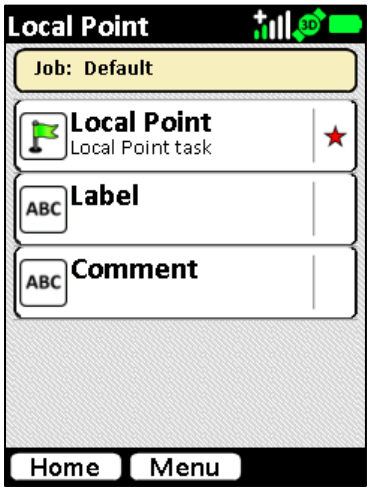
Step-by-step

Select the Local Point MapSight Tool from the Home menu

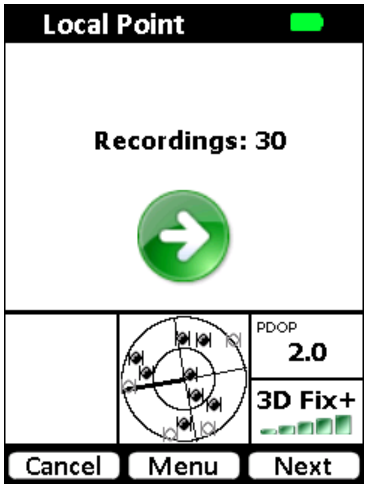


The default tasks for the Local Point MapSight Tool will be shown. A red star will indicate the mandatory tasks.

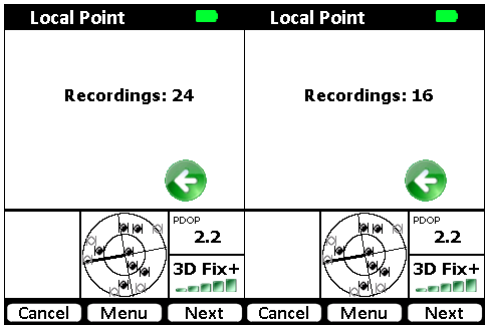
Tap the **Local Point** task to start the local point averaging screen.



To use this mode, tap the start button to being calculating an average position.

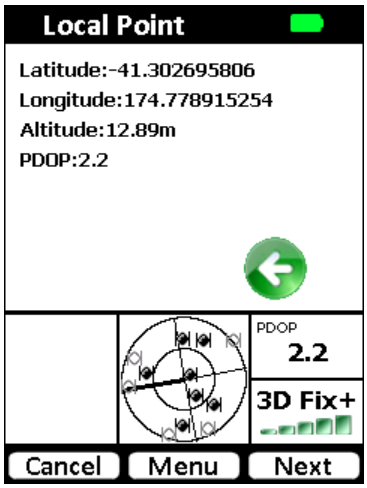


GPS readings will be counted down until all recordings are completed.



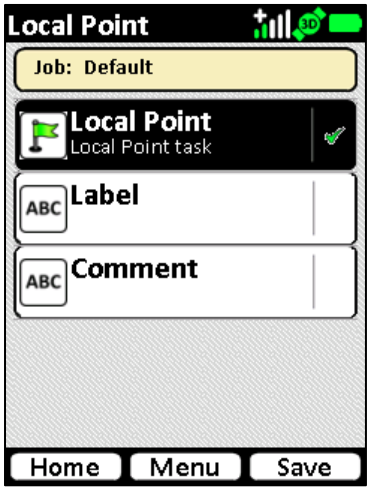
When all recordings a complete an average Latitude, Longitude, Altitude and PDOP will be presented.

Tap Next to save the positional information



The screen will revert to the Local Point selection screen. Where there is a successful recording a green tick will appear alongside the task.

From here the information can be abandoned (tap the Home button), retaken (tap **Local Point** again to delete the reading and re-enter the countdown), and data entered into non-mandatory Label and Comment fields.



Tap the **Label** task button to enter the Label entry screen.

Tap the **Comment** task button to enter the Comment entry screen.

Tap the **Save** button to save the reading without Label/Comments recorded.

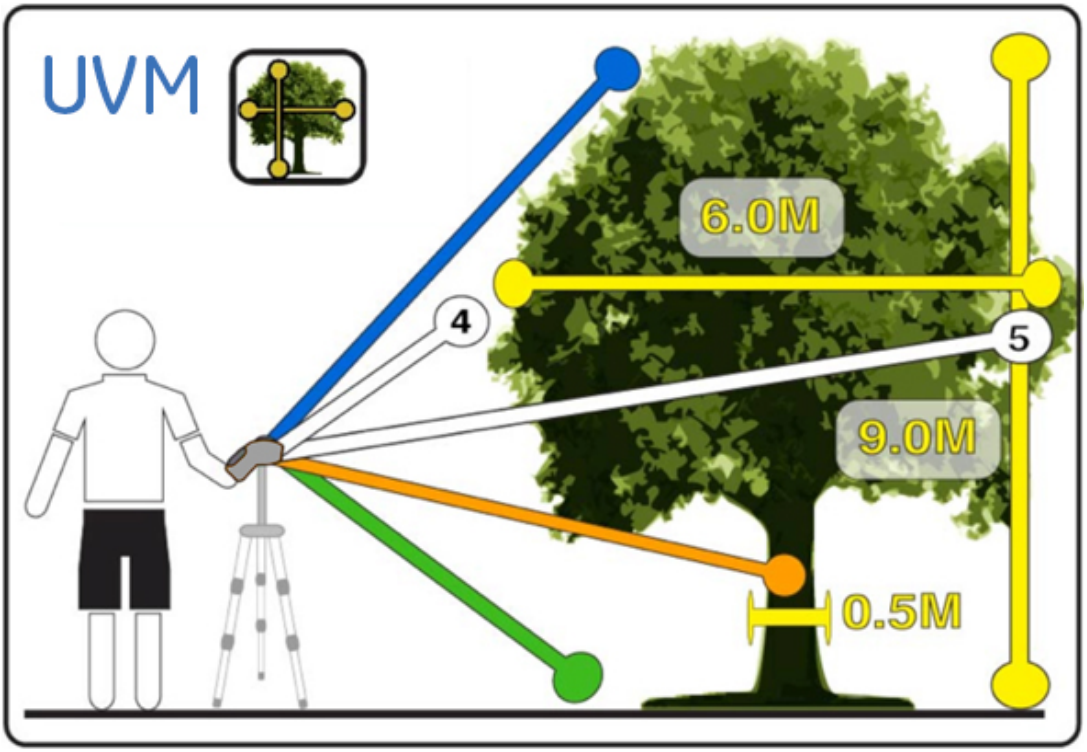
Tap the **Home** button to abandon the reading and delete the recorded data.

Refer to the **Target Position** MapSight Tool for instruction on adding Label and Comment

Tree Assessment

Summary

This MapSight Tool is used to capture an annotated and geo-referenced 5MP photo for tree assessments.

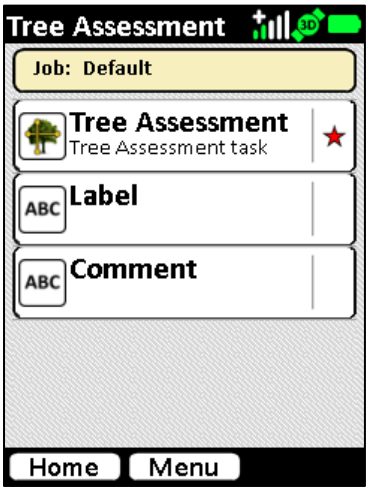


Step-by-step

Select the Tree Assessment MapSight Tool from the Home menu

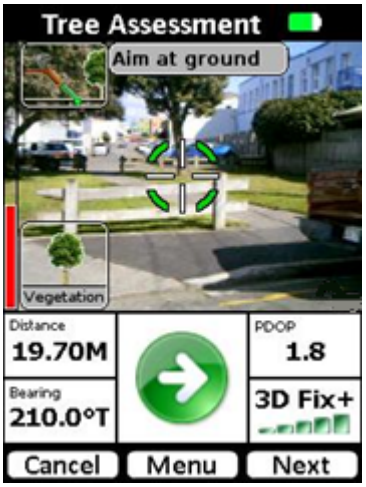
The default tasks for the Tree Assessment MapSight Tool will be shown. A red star will indicate the mandatory tasks.

Tap the **Tree Assessment** task to start the video preview screen.



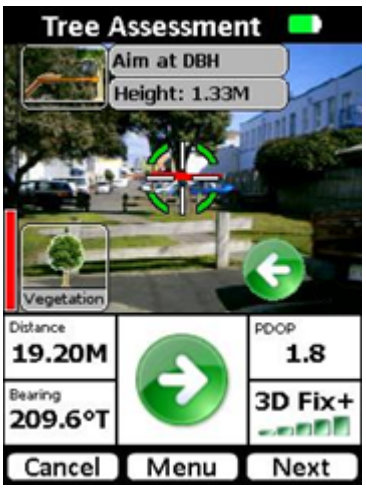
To use this mode, follow the onscreen instructions to capture the required detail.

Aim the MapSight at the base of the tree and tap the Next (green arrow) button.

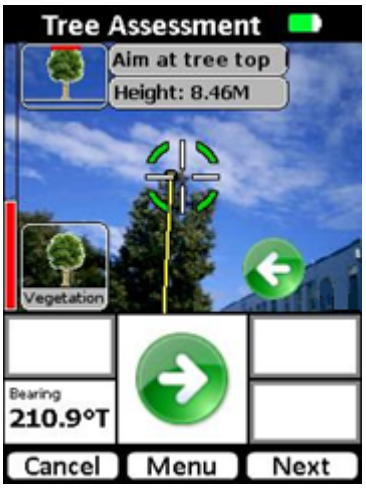


Aim the MapSight at the truck of the tree to mark the DBH (diameter at breast height) and tap the Next (green arrow) button.

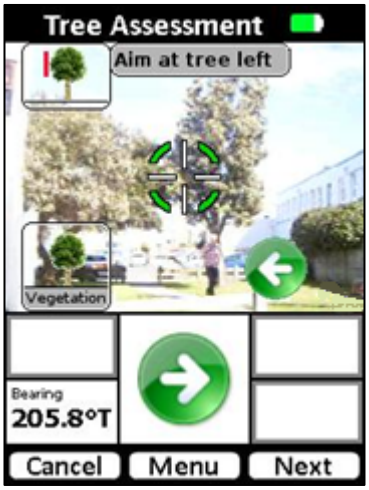
A temporary zoomed image of the selected DBH area will be stored for later use.



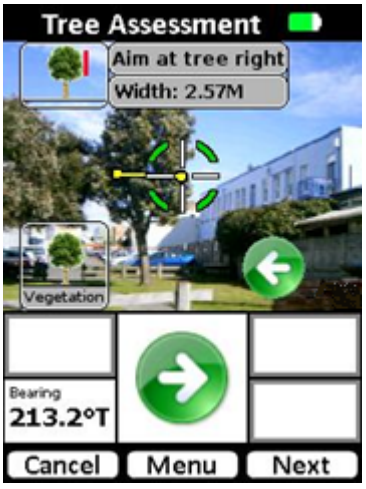
Aim the MapSight at the tree and tap the Next (green arrow) button.



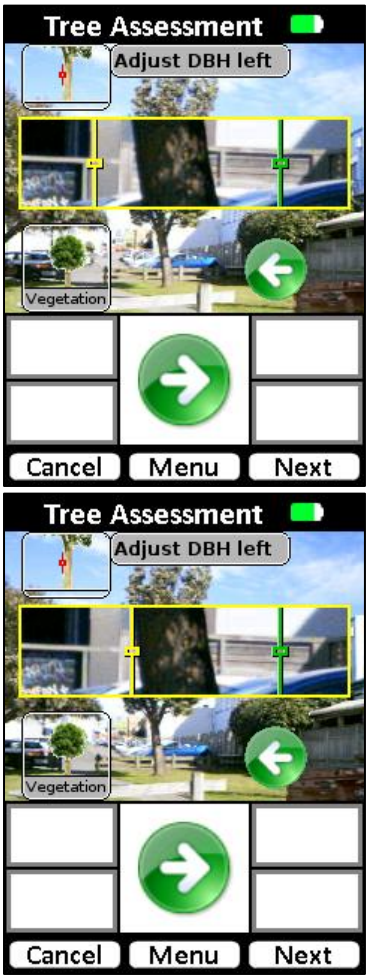
Aim the MapSight at the left most extent of the foliage and tap the Next (green arrow) button.



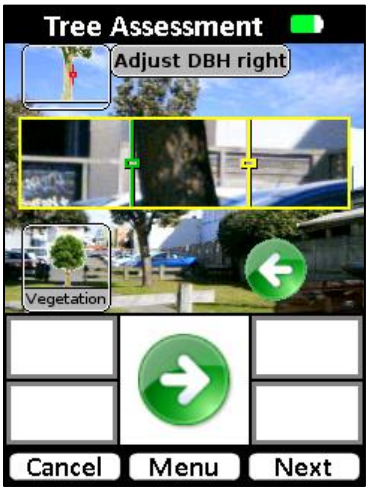
Aim the MapSight at the right most extent of the foliage and tap the Next (green arrow) button.

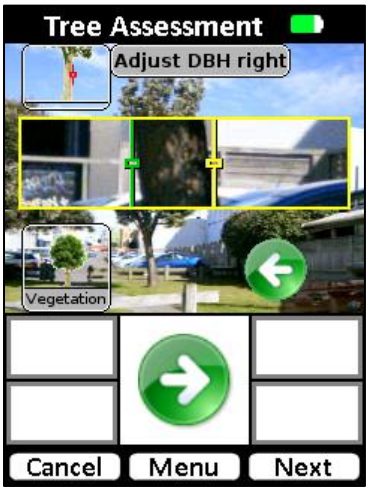


Adjust the left hand side of the DBH.
User the Left and Right hardware buttons to move the left DBH marker to align with the left side of the tree trunk
Tap the Next (green arrow) button.



Adjust the right hand side of the DBH.
User the Left and Right hardware buttons to move the right DBH marker to align with the sight side of the tree trunk
Tap the Next (green arrow) button.

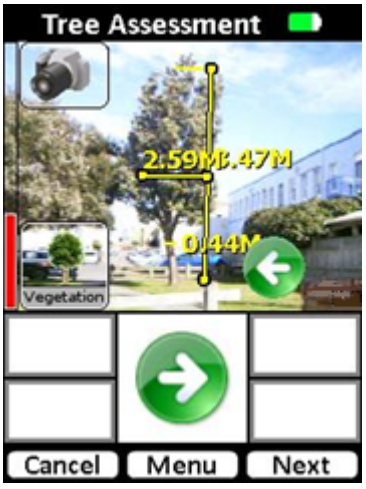




Where enabled, the Review screen will show the captured target photo with the marked-up tree height, width and DBH.

Tap the back button (green arrow) to abandon the image and retake the target.

Tap the Next button to save the photo and move to the task screen.



The camera will click, and depending on camera settings, will revert to the Tree Assessment selection screen. Where there is a successful recording a green tick will appear alongside the task.

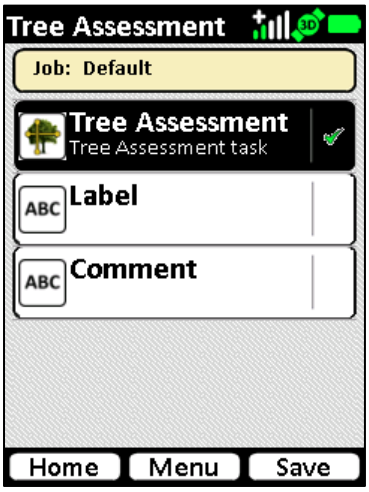
From here the information can be abandoned (tap the Home button), retaken (tap Tree Assessment again to delete the photo and re-enter the video preview), and data entered into non-mandatory Label and Comment fields.

Tap the **Label** task button to enter the Label entry screen.

Tap the **Comment** task button to enter the Comment entry screen.

Tap the **Save** button to save the target without Label/Comments recorded.

Tap the **Home** button to abandon the target and delete the recorded data.

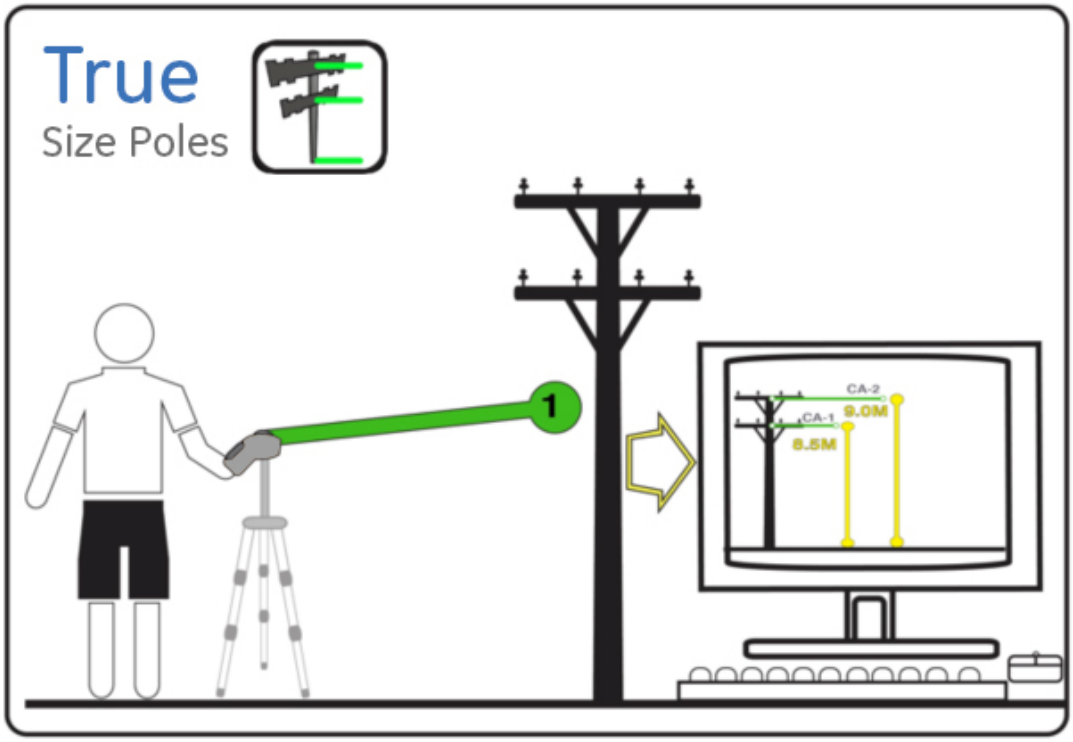


Refer to the **Target Position** MapSight Tool for instruction on adding Label and Comment

TrueSize Poles

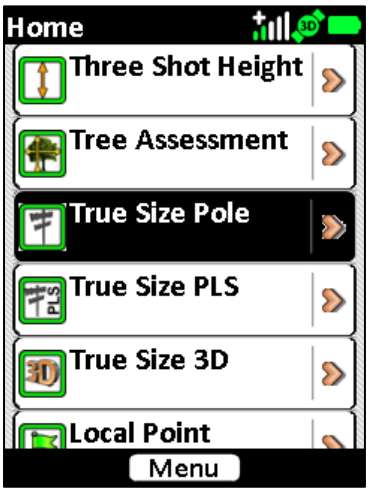
Summary

This MapSight Tool is used to capture a calibrated, geo-referenced 5MP photo of a telecommunication or utility pole. The photo can then be transferred to the desktop for measurement and annotation using the desktop MapSight Annotate Poles software.



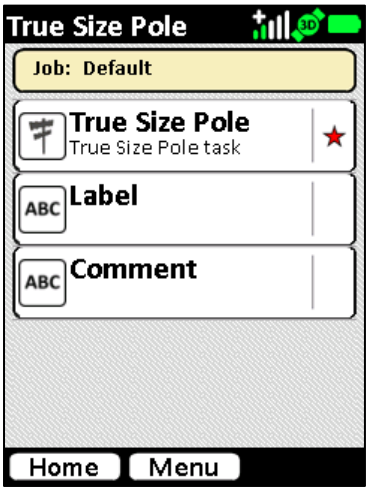
Step-by-step

Select the True Size Pole MapSight Tool from the Home menu



The default tasks for the True Size Pole MapSight Tool will be shown. A red star will indicate the mandatory tasks.

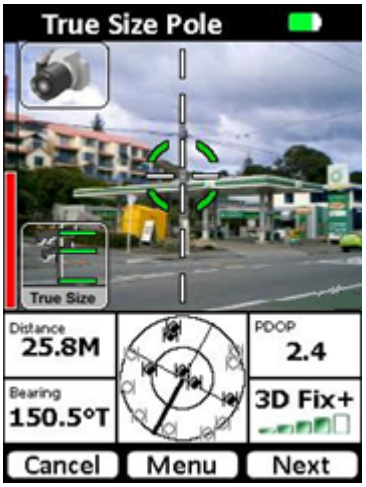
Tap the **True Size Pole** task to start the video preview screen.



To use this mode, aim the MapSight to compose your scene with the pole in the center of the preview.

The vertical part of the crosshair should align with the vertical pole

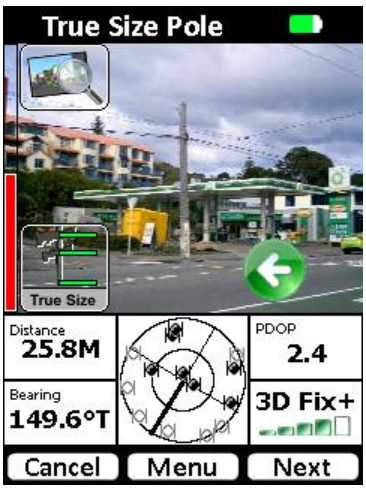
Tap the Next button to capture the target. Depending on settings, the camera click noise will be made and either the Review or Task screen will be displayed



Where enabled, the Review screen will show the captured target photo.

Tap the back button (green arrow) to abandon the photo and retake the target.

Tap the Next button to save the photo and move to the task screen.



The camera will click, and depending on camera settings, will revert to the True Size Poles selection screen. Where there is a successful recording a green tick will appear alongside the task.

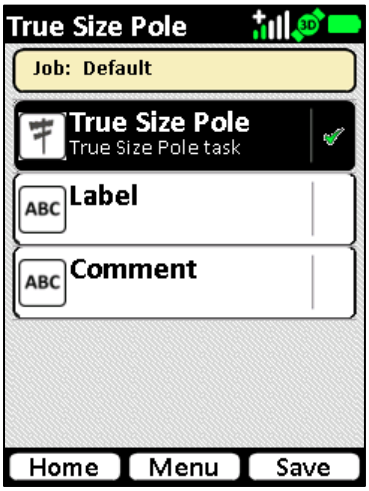
From here the information can be abandoned (tap the Home button), retaken (tap True Size Poles again to delete the photo and re-enter the video preview), and data entered into non-mandatory Label and Comment fields.

Tap the **Label** task button to enter the Label entry screen.

Tap the **Comment** task button to enter the Comment entry screen.

Tap the **Save** button to save the target without Label/Comments recorded.

Tap the **Home** button to abandon the target and delete the recorded data.



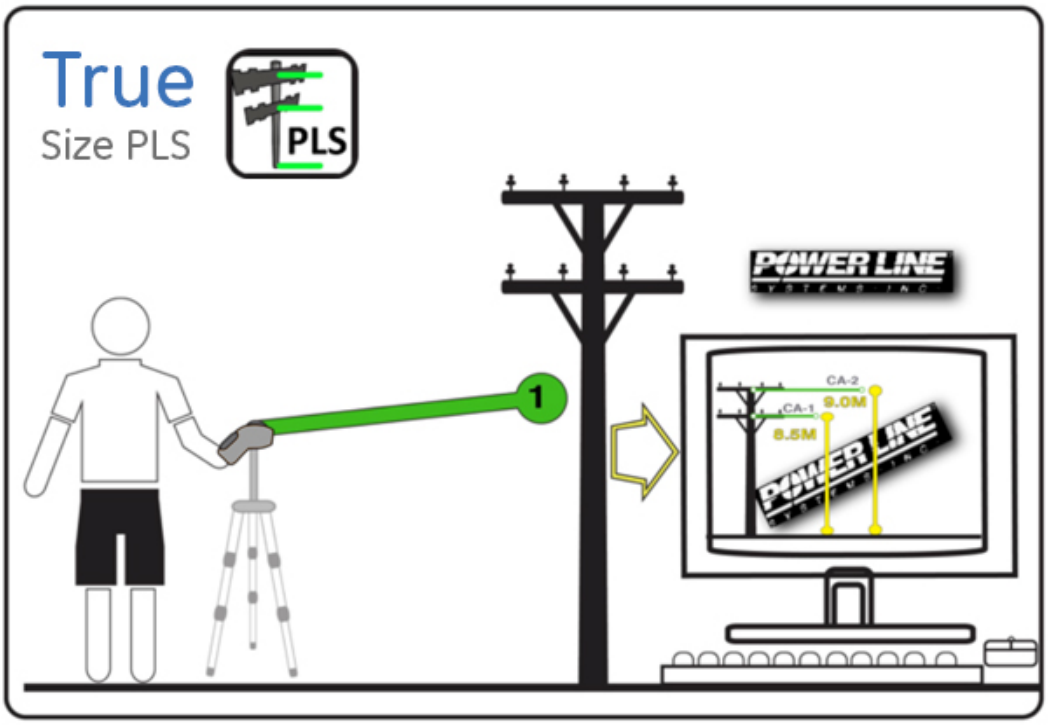
Refer to the **Target Position** MapSight Tool for instruction on adding Label and Comment

TrueSize PLS

Summary

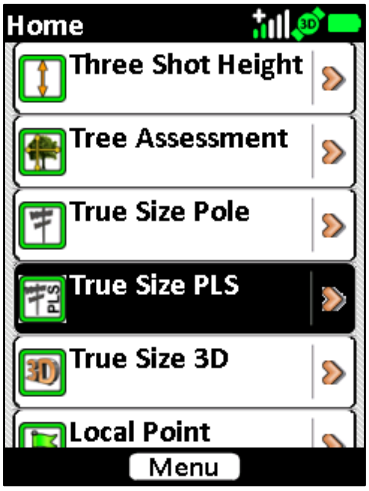
TrueSize PLS mode is a MapSight Tool available to MapSight users who require integration with Power Line Systems, Inc. (PLS) products. More information about the TrueSize PLS tool is available from your MapSight reseller.

This MapSight Tool is used to capture a calibrated, geo-referenced 5MP photo of a telecommunication or utility pole. The photo can then be transferred to the desktop for measurement and annotation using the desktop MapSight Annotate PLS software. The annotated image is then compatible for export into software products from Power Line Systems, Inc.



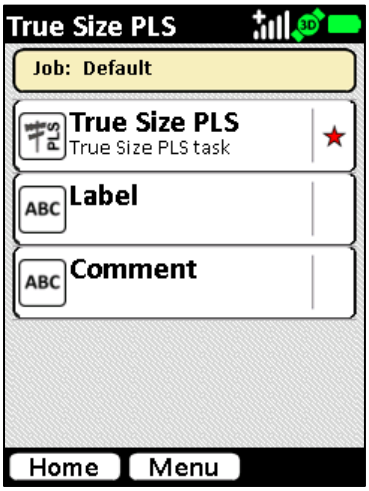
Step-by-step

Select the True Size PLS MapSight Tool from the Home menu



The default tasks for the True Size PLS MapSight Tool will be shown. A red star will indicate the mandatory tasks.

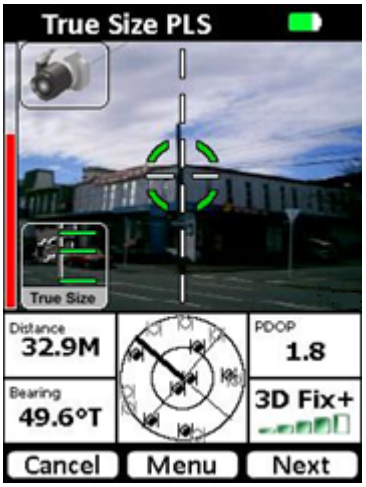
Tap the **True Size PLS** task to start the video preview screen.



To use this mode, aim the MapSight to compose your scene with the pole in the center of the preview.

The vertical part of the crosshair should align with the vertical pole

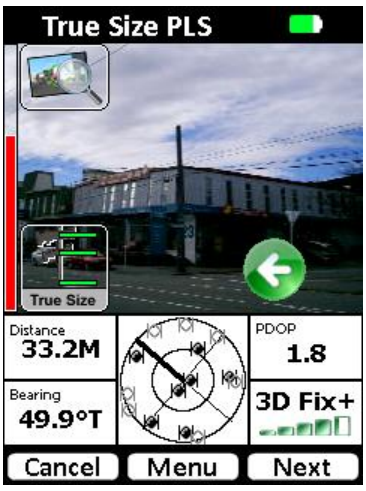
Tap the Next button to capture the target. Depending on settings, the camera click noise will be made and either the Review or Task screen will be displayed



Where enabled, the Review screen will show the captured target image.

Tap the back button (green arrow) to abandon the photo and retake the target.

Tap the Next button to save the photo and move to the task screen.



The camera will click, and depending on camera settings, will revert to the True Size PLS selection screen. Where there is a successful recording a green tick will appear alongside the task.

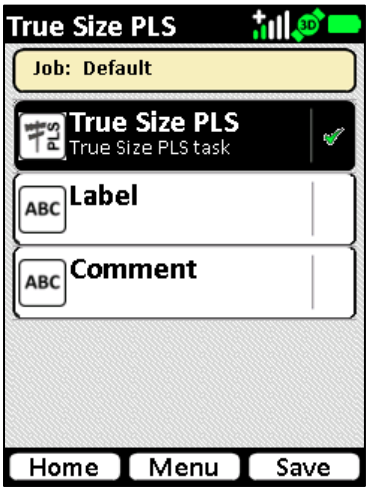
From here the information can be abandoned (tap the Home button), retaken (tap True Size PLS again to delete the photo and re-enter the video preview), and data entered into non-mandatory Label and Comment fields.

Tap the **Label** task button to enter the Label entry screen.

Tap the **Comment** task button to enter the Comment entry screen.

Tap the **Save** button to save the target without Label/Comments recorded.

Tap the **Home** button to abandon the target and delete the recorded data.



Refer to the **Target Position** MapSight Tool for instruction on adding Label and Comment

Data Transfer to Desktop

The Microsoft Windows® based MapSight View application is used to transfer data from the MapSight unit to the desktop via ActiveSync® / Windows® Mobile Device Center. Once the MapSight data has been transferred to the desktop, various report formats can be generated from the MapSight View Reports view.

More details on transferring data and report generation using MapSight View can be found in the MapSight View User Manual.

MapSight Utilities

Compass Calibration

Diagnostics

GPS Info

License Manager

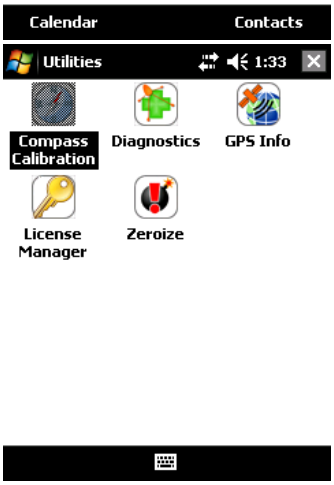
Zeroize

MapSight Utilities

Your MapSight unit also comes with a number of on-board utilities to assist in use of and maintain your MapSight unit.

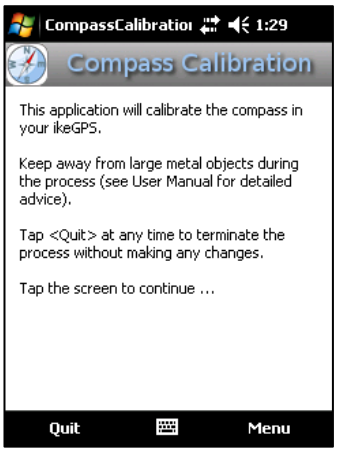
These utilities are available from the Start menu on the Home screen. Tap Start, then select the MapSight Utilities option

The list of installed MapSight Utilities will be shown.



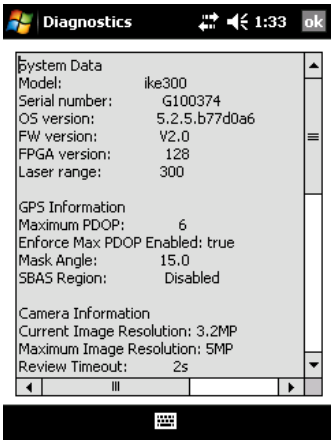
Compass Calibration

Compass Calibration is an alternate method of accessing the same utility that is available on the Home screen.


CompassCalibratio 1:29
Compass Calibration
This application will calibrate the compass in your ikeGPS.
Keep away from large metal objects during the process (see User Manual for detailed advice).
Tap <Quit> at any time to terminate the process without making any changes.
Tap the screen to continue ...
Quit
Menu

The same procedure as documented in the "Compass calibration" section earlier in this manual is used for operating this utility.

Diagnostics



Diagnostics is an application that:

1. Shows system information in the following categories:
   - System Data
   - GPS Information
   - Camera Information
   - Data Storage Information
2. Tests communication with and reports on the following instruments:
   - Compass
   - Laser
   - GPS
3. Checks Battery levels

It is advisable to soft reset the device before running this application to ensure that no running programs may affect the test. Please ensure that you save all data before resetting the unit.

The information available in the Diagnostics screen will also be useful should you need to contact your MapSight reseller or MapSight Support for technical or user assistance with your MapSight unit. When run, the Diagnostics application also stores a report (in plain text format) in the root folder (\) of your MapSight unit.

Note: *Diagnostics will not run if the MapSight application is still running. Please ensure MapSight is exited before running the Diagnostics application.*

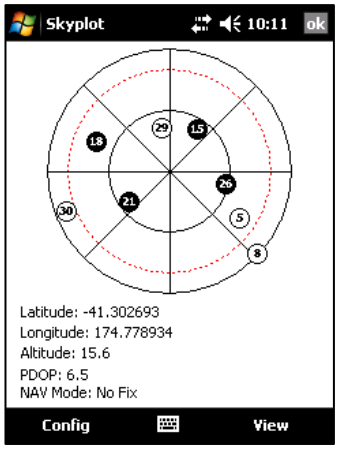
GPS Info

This **GPS Info** utility allows you to see information in regards to which GPS satellites are accessible to your MapSight.

This information is available from the three options on the View menu.

- Skyplot
- Satellite Information (Sat info)
- Navigation Info (Nav info)

Skyplot



This is the default screen in GPSInfo. (If you have moved away from it, you can return by selecting *View* > *Skyplot*.) It shows a map of all the satellites that your MapSight is aware of, with identification numbers. Solid circles mean that MapSight has an active connection with the satellite.

This screen also gives information on the physical location of your MapSight, based on data it receives from the GPS satellites.

The top of the screen is always North

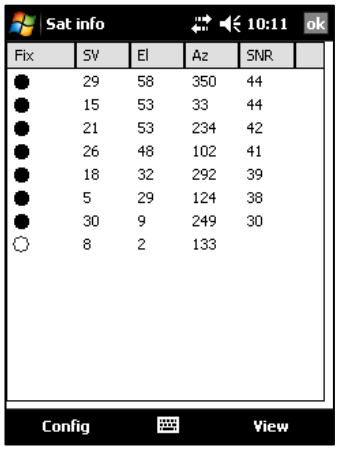
Latitude and **Longitude** are the users geospatial coordinates.

Altitude is the height above sea level in meters.

PDOP is a measure of the positional accuracy of the GPS reading.

Nav Mode is the navigational status of GPS Fix. A 2-D (two dimensional) fix only includes latitude and longitude data. A 3-D (three dimensional) fix also includes altitude data. The available constellation of satellites available affects whether altitude can be calculated.

Sat Info



This screen gives a table of all visible satellites, along with numeric data about their location and accessibility. To access this screen, select *View* > *SatInfo*.

Fix is a column showing which satellites are being used to calculate the GPS position.

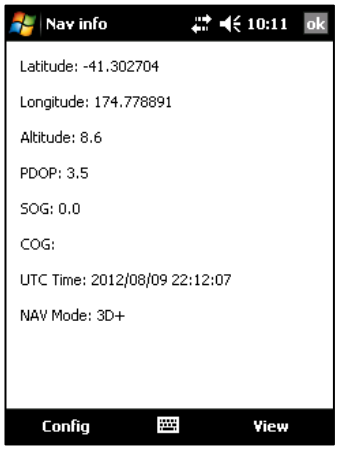
SV provides the Space Vehicle (or GPS satellite) identification number.

El gives the elevation of the satellite in degrees.

Az gives the azimuth of the satellite, with true north defined as 0° and true south defined as 180°.

SNR gives the Signal-to-Noise Ratio of communication with the satellite. A value between 40 and 50 is considered good.

Nav Info



This screen gives the navigational information of your MapSight.

Latitude and **Longitude** are the users geospatial coordinates.

Altitude is the height above sea level in meters.

PDOP is a measure of the positional accuracy of the GPS reading.

SOG gives the **S**peed **O**ver **G**round in meters per second.

COG gives the **C**ourse **O**ver **G**round. This value is only meaningful if your MapSight is physically moving.

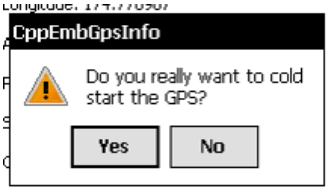
UTC Time gives the current Universal Time Code date and time.

Nav Mode is the navigational status of GPS Fix. A 2-D (two dimensional) fix only includes latitude and longitude data. A 3-D (three dimensional) fix also includes altitude data. The available constellation of satellites available affects whether altitude can be calculated.

This GPS Info utility also has a Config menu that allows access to the following tools:

- Cold Start
- Settings

Cold Start



Should your MapSight unit be taking a long time to get a useable GPS fix, the GPS can be forced to restart and require a completely fresh almanac from available satellites. A full Cold Start and almanac refresh can take up to 30 minutes depending on local satellite coverage.

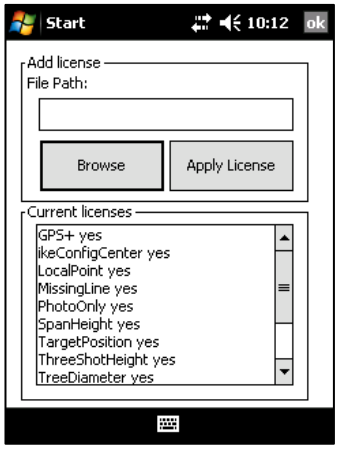
Tapping the [Yes] button at the 'Do you really want to cold start the GPS?' prompt will flush all current information in the GPS and force it to reacquire this data. Tapping [No] will cancel the Cold Start request.

CAUTION: Cold starting the GPS will reset GPS position reception and will not result in an accurate or useable GPS position fix until the new fix is achieved.

Settings

This is a shortcut to the MapSight Settings 'GPS' tab.

License Manager



The License Manager utility manages access to licenses to MapSight Tools and options available via the MapSight application and other options available for use on your MapSight unit.

MapSight License Files (ILF) are tailored to individual MapSight units – a license file that has been generated for one unit will not function on another unit.

The 'Add license' section relates to the functionality to apply another license file to the MapSight unit. MapSight units are preinstalled with licensing appropriate to the customer order at time of shipping.

If additional or a change to existing licensing is required, a new license file with application instructions will be forwarded as appropriate.

The 'Current licenses' section shows the list of licenses and options that are currently activated on the MapSight unit.

Depending on the original licensing of the device the list of 'Current licenses' may vary from unit-to-unit

Zeroize

This utility is designed to remove all user-installed programs, settings and data, including all MapSight application-specific data from the MapSight unit in preparation for reinstalling or upgrading the MapSight OS Software.

WARNING! **Zeroizing your MapSight unit will remove all software and data from the unit and render it unusable as a MapSight unit until MapSight OS software is installed.**

Please ensure you have backed up all important data (captured information, personal data, software registration codes, etc.), and you have an appropriate version of the MapSight OS installation software before performing this function. There are no undelete utilities to restore this data.

To Zeroize, select *Start* > *MapSight Utilities* > *Zeroize*.

You will see the **WARNING** screen and message, and a choice to **Confirm** or **Cancel** the operation.

When Confirm is tapped/selected there are no undelete utilities to restore this data. Once the Zeroize process has begun data cannot be recovered.

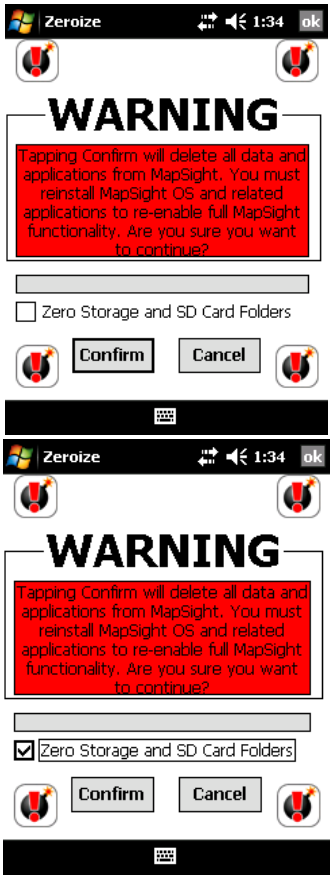
The Zeroize application has two modes of for resetting the MapSight unit:

Mode 1: Delete Applications and 'My Documents' data

The default option is to delete only the MapSight OS system and all other data and applications BUT will leave data in the 'Storage' folder, and optionally fitted SD Card, intact.

Tapping the [**Confirm**] button reset the MapSight unit to a factory state but retains data in the Storage folder and on a fitted SD Card.

Tapping the [**Cancel**] button will close the Zeroize applet.


Zeroize
1:34
ok
WARNING
Tapping Confirm will delete all data and applications from MapSight. You must reinstall MapSight OS and related applications to re-enable full MapSight functionality. Are you sure you want to continue?
Zero Storage and SD Card Folders
Confirm
Cancel

Mode 2: Clean All

Selecting the 'Zero Storage and SD Card Folders' checkbox will delete all applications and data on the MapSight unit.

Tapping the [**Confirm**] button will reset the MapSight unit to a factory state. This will also delete all contents of the \Storage folder and any fitted SD Card.

Note: *As this process deletes all data on a fitted SD card, a Zeroize with 'Zero Storage and SD Card Folders' selected may take some time depending on the size of the SD card installed.*

Tapping the [**Cancel**] button will close the Zeroize applet.

Zeroize
1:34
ok
WARNING
Tapping Confirm will delete all data and applications from MapSight. You must reinstall MapSight OS and related applications to re-enable full MapSight functionality. Are you sure you want to continue?
Zero Storage and SD Card Folders
Confirm
Cancel

After Zeroize, MapSight OS must be re-installed to restore full MapSight functionality. Any other applications that were previously installed on the MapSight unit must also then be manually reinstalled to return that functionality.

Appendix 1: MapSight Maintenance and Information

Caring for your MapSight

Troubleshooting and Service Tips

Product Specification

Accessory Instructions

Software Licensing

Battery Safety

Hardware Warranty, Software Maintenance and Support

Certification and Classifications

Additional Support

Appendix 1: MapSight Maintenance and Information

Caring for your MapSight

This section how to store, clean, and protect your MapSight unit and battery packs. Specifically, it provides guidelines for:

- storing your MapSight and battery packs
- protecting the touchscreen
- protecting your MapSight against mechanical shock
- battery pack warning
- equipment warnings
- using your MapSight in extreme temperatures
- cleaning your MapSight
- repairing your MapSight
- disposing of your MapSight and battery packs

Storing your MapSight and battery packs

This section describes what you need to know about storing your device and battery packs, including:

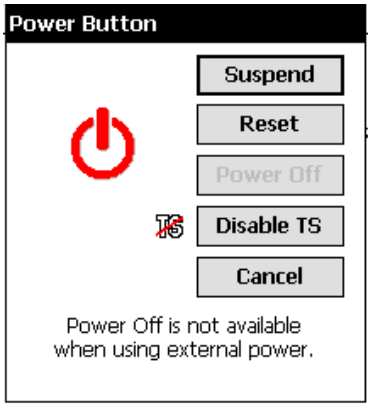
- the storage temperature range of your MapSight
- how to store your MapSight for less than two weeks
- how to store the device for more than two weeks
- how to take your MapSight out of extended storage

Storage temperature range of your MapSight: Your MapSight can be stored at temperatures between -22° F and 140° F (-30° C to 60° C).

Where possible, store your MapSight indoors out of direct sunlight, in a cool/non-humid location and away from electric/magnetic materials. Doing so helps protect your device from extreme temperature changes and helps your device run efficiently at start up.

Storing your MapSight for less than two weeks: If you plan to store your device for less than two weeks, suspend the device by following these steps:

1. As a precaution, back up your data onto a desktop computer or an external storage device such as a SD card. (See *Using the Hardware* for more instructions on backing up your data.)
2. Leave the battery pack in the device.
3. If you plan to store the device longer than a few days, it is a good idea to leave the device connected to the wall charger or to make sure the battery pack is fully charged.
4. Suspend the device.



Storing your MapSight for more than two weeks:

To store the device safely for longer than two weeks, follow these steps:

1. Back up your data.
2. Press the Task Manager button to close all running application programs.
3. Charge the battery pack to full capacity (100%).
4. Unplug the wall charger. Press the Power button until the Power Button menu appears.
5. Select *Power Off* from the menu, and then tap *OK*.
6. Place your MapSight in a safe, dry place.

Taking your MapSight out of extended storage: The battery pack discharges slightly during extended storage periods. When you are ready to use your MapSight again, follow these steps so your battery pack runs efficiently:

Plug your MapSight into a charger.

Charge the battery pack. (To check the battery power status, tap on the battery icon at the top of the screen.)

Only charge the battery pack in temperatures between 32°F and 104°F (0°C and 40°C). For best results, charge the battery pack at room temperature (68°F or 20°C)

Protecting the touchscreen

Protect the touchscreen from impact, pressure, or abrasive substances that could damage it. To further protect the touchscreen, a tested screen protector accessory is available from your MapSight reseller.

CAUTION: Be sure to replace the screen protector as often as the screen protector manufacturer packaging directs.

To apply a screen protector, follow these steps:

1. Make sure your MapSight is free of oils and dirt. You can wipe it with a microfiber cloth.
2. Fit the screen protector onto your MapSight screen in accordance with the supplied installation instructions.
3. Smooth the screen protector while peeling back the liner, working out air bubbles as you go. Continue smoothing until the liner is removed.

Note: *Some air bubbles may still be visible, but they fade away in a short time. You can use a credit card to gently push out any excess air.*

Protecting your MapSight against mechanical shock

MapSight is designed for protection from mechanical shock. It has been test-dropped from five feet (1.524m) onto concrete. Shock protection is guaranteed only when the entire body molding (including SD Card cover and Connector protector) is securely in place.

Equipment warnings

WARNING! **To** reduce the risk of personal injury, electrical shock, fire or damage to the

equipment:

- Plug the wall charger into an electrical outlet that is easily accessible at all times.
- Disconnect power from the equipment by unplugging the wall charger from the electrical outlet or unplugging the synchronization cable from the host computer.
- Do not place anything on the wall charger cord or any of the other cables. Arrange them so that no one may accidentally step on or trip over them.
- Do not pull on a cord or cable. When unplugging the wall charger from the electrical outlet, pull on the plug, not the cord.

Use only wall chargers intended for your MapSight. Using any other external power source can damage your product and void your warranty.

Using your MapSight in extreme temperatures

MapSight operates in ranges from -22°F to 122°F (-30°C to 50°C). To help your device function properly, store the device indoors when possible.

Other tips:

- If your MapSight is exposed to temperatures below 14°F (-10°C), the device may slow down or the display backlight may become dim to reduce the load on the battery power.
- Extremely low or high temperatures may prevent the battery pack from charging. Charge the battery pack in temperatures between 32°F and 104°F (0° C and 40° C). For best results, charge the battery pack at room temperature (68°F or 20°C)

Cleaning your MapSight

This section explains how to clean

- the touchscreen
- the communications module (area housing the USB port, DC jack, and serial port)
- the speaker or microphone
- the display bezel
- data capture module

Touchscreen: To clean the touchscreen, follow these steps:

1. Press the power button briefly to suspend the device.
2. If you applied a protector to the touchscreen, carefully remove it.
3. Apply water or a mild cleaning solution such as *Windex*® or *409*® to a microfiber cloth and gently wipe off the touchscreen. Other approved cleaners include *Citrus Wonder*® and *Citrus All Purpose Cleaner*®.

CAUTION: Do not use tissues, paper towels, or harsh cleaning agents to clean the touchscreen.

1. If you used a cleaning solution, rinse the touchscreen with water and dry it with a microfiber cloth.
2. Press the power button to resume the device.

CAUTION: Long exposure to the following solutions may damage your device:

- pine oil
- oil based paint
- automotive brake cleaner
- isopropyl alcohol

- carburetor cleaner

In case the device is exposed to one of these solutions, wipe it off with a mild cleaning solution.

Case overmolding: Clean the rubber overmolding that surrounds the case with a cloth and a mild cleaning solution like *409* or *Citrus Wonder*. After you are done cleaning, rinse the device with water.

Communications module (area housing the USB port, DC jack, serial port): To clean the communications module, run it under a faucet. Use a soft toothbrush or toothpick to clean out any remaining dirt.

Speaker and microphone: If debris gets in the speaker or microphone, use a soft bristle brush to remove it. Do not insert any object into the speaker or microphone holes.

Display bezel. If the edge under the bezel gets dirty, use a microfiber cloth to remove the debris. Do not remove the bezel.

Data capture module. If debris gets in the camera lens, use a soft bristle brush to remove it. Use a soft bristle brush or microfiber cloth for removing debris or marks from the distance finder lenses. Do not use any hard or sharp objects that may scratch the lenses.

Repairing your MapSight

If your MapSight unit is malfunctioning or in need of repair, contact your MapSight reseller or service center for assistance.

Refer to sections **Preparing for a support center call** and **Additional Support** and your warranty information for details on support options for your MapSight equipment.

WARNING! **Do not attempt to repair the MapSight device yourself. This action voids the warranty and may result in a chargeable repair.**

If your MapSight reseller or service center deems that your MapSight unit needs to be returned for repair assessment a Return Materials Authorization (RMA) reference will be issued. Where RMA is issued, please ensure a printed copy of any RMA documentation is returned with the faulty MapSight equipment to the address detailed in the RMA documentation.

Troubleshooting and Service Tips

This section includes some basic troubleshooting tips. It also explains what you need to do before you call your service center for a repair.

Answers to questions about Windows Mobile may be available through the help files on your device or on the Windows Mobile website from Microsoft. If you cannot find answers to your questions through these methods, contact your service center. (See the section in called *Preparing for a service center call* and *Additional Support.)*

Troubleshooting tips

This section provides solutions for the following issues:

1. The battery pack will not charge fully.
2. The touchscreen responds inaccurately to stylus taps.
3. The screen does not calibrate correctly or completely.
4. MapSight runs slowly.
5. MapSight drops its ActiveSync connection.
6. MapSight locks up.

Issue 1: The battery pack will not charge to 100% or to "0 mAH Consumed".
Solutions: Try discharging the battery pack completely. You can turn off all auto-suspend and auto-backlight timers to drain the battery pack more quickly. Once the battery pack is fully discharged, try charging it again.

If the battery pack does not charge to full, try repeating the full discharge and charge cycle a few more times.

If the battery pack still does not charge to full, try using a different battery pack to confirm that the problem is specific to the original battery pack.

Only charge the battery pack in temperatures between 32°F and 104°F (0°C and 40°C). For best results, charge the battery pack at room temperature (68°F or 20°C).

Issue 2: The touchscreen does not respond accurately to stylus taps.
Solutions: Try recalibrating the touchscreen. (See the section called *Using the touchscreen.)*

If the device is not responding to stylus taps at all and you are on the Today screen, look to see if the device is locked. To unlock the device, press the *Unlock* soft key on the screen.

If the device is unlocked but the stylus continues to respond inaccurately, close all open programs and reset the device.

Issue 3: During calibration, the screen does not respond to stylus strokes or does not complete the calibration process.
Solutions: Check to see if there is damage or wear on any area of the touchscreen. In case of damage, contact your service center.

Issue 4: MapSight runs slowly.
Solutions: It is possible that you have too many programs running. Try closing any programs you are not using. To view and close running programs, follow these steps:

1. Press the Task Manager button. The Task Manager window appears.
2. Select the program(s) you want to close.
3. Tap *End Task*. This closes the program.

Issue 5: My MapSight quickly drops its ActiveSync connection to my desktop computer.
Solutions: Firewall programs sometimes cause ActiveSync connection problems. In these cases, the firewall sees your MapSight as a strange and possibly hostile computer and prevents the device from connecting to the desktop computer.

To allow the mobile device to connect to your desktop computer, follow these steps:

Use the serial cable to connect your device to the desktop computer. Follow the ActiveSync

wizard instructions.

If your firewall application brings up a warning message asking whether you want to allow a connection, check the option to allow the connection and click "Yes".

Note: *If the warning message above does not appear when you try to connect to the desktop computer but the device is still being dropped, contact your service center.*

Issue 6: Your MapSight locks up.
Solution: To reset the device, press and hold the Power button for 10 seconds or until the screen goes dark. The device turns on again after a few seconds.

Issue 7: Captured data is not writing to the fitted SD Card.
Solution: Check the MapSight Data settings (refer section **Settings – Data Folder**) to ensure that the Current Data Folder: is pointing to the \SD Card\

Note: *The required folder on the SD Card must be created (via File Explorer) before the [Save] button is used to set the* **Data Folder**.

Product Specifications

Full specifications of the individual instruments are available at http://www.gemapsight.com/

Basic specifications are as follows:

Model	MapSight
Laser Range (m)	300
Camera Resolution (MP)	5

Accessory Information

The MapSight comes with a number of standard essential or field accessories depending on the model purchased. There are a variety of optional accessories or spare parts that can be purchased to enhance you MapSight user experience.

Tripod

The MapSight low magnetic signature tripod has been tested to ensure that it does not cause distortion to the in-built digital compass. For more information on use of the MapSight Tripod please consult the material distributed with the MapSight Tripod and available on the MapSight website.

Batteries

MapSight batteries should only be charged in or with approved MapSight battery charging accessories.

New batteries should always be charged in a MapSight unit to ensure optimal first-use calibration.

Additional information on MapSight batteries is available in the 'Battery Safety' section of this document.

Should your MapSight battery not be reporting a correct charge level, please refer to the Battery Recalibration instructions available from the Support section of the MapSight website.

Travel Charger

The Travel Charger is designed to be powered from either the standard MapSight AC Adaptor or Vehicle Charger Cable.

It is recommended that new batteries not be charged in the Travel Charger as this will not correctly set the optimal first-use calibration for a new battery. New batteries should be initially charged in a MapSight unit. Subsequent charges can be completed in the Travel Charger.

External Patch Antenna

The External Patch Antenna provides an alternative reception GPS reception option to ensure a GPS fix is maintained while the MapSight unit is travelling.

Glare Shield

The Glare Shield provides a method of reducing the effects of harsh light sources on the MapSight units LCD screen.

This accessory is designed to be placed on the bezel area surrounding the LCD screen. The LCD screen can then viewed through the Glare Shield lens. The Glare Shield lens can then be focused to further improve the view of the LCD screen.

Correct placement of Glare Shield	Incorrect placement of Glare Shield

External GPS Receivers

External GPS receivers have been tested to function with the MapSight unit. For more details on use of external GPS receivers with MapSight, please consult your MapSight Sales office or reseller.

Other Accessories

Other commonly used MapSight accessories are shown on the MapSight website. For more details on these accessories, please consult your MapSight Sales office or reseller.

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MapSight Software

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The software is licensed, not sold. This agreement only gives you some rights to use the software. ike[GPS], JS and Microsoft reserve all other rights. Unless applicable law gives you more rights despite this limitation, you may use the software only as expressly permitted in this agreement. In doing so, you must comply with any technical limitations in the software that allow you to use it only in certain ways. You may not:

- work around any technical limitations in the software;
- reverse engineer, decompile or disassemble the software;
- make more copies of the software than specified in this agreement;
- publish the software for others to copy;
- rent, lease or lend the software; or
- use the software for commercial software hosting services.

Except as expressly provided in this agreement, rights to access the software on this device do not give you any right to implement Microsoft patents or other Microsoft intellectual property in software or devices that access this device.

You may use remote access technologies in the software such as Remote Desktop Mobile to access the software remotely from a computer or server. You are responsible for obtaining any licenses required for use of the protocols to access other software.

4. **INTERNET-BASED SERVICES.**

Microsoft provides Internet-based services with the software. Microsoft may change or cancel them at any time.

a. **Consent for Internet-Based Services.** The software features described below connect to Microsoft or service provider computer systems over the Internet. In some cases, you will not receive a separate notice when they connect. You may switch off some of these features or not use them. For more information about these features, visit http://go.microsoft.com/fwlink/?LinkId=81931.

By using these features, you consent to the transmission of this information. Microsoft does not use the information to identify or contact you.

Device Information. The following features use Internet protocols, which send to the appropriate systems device information, such as your Internet protocol address, the type of operating system, browser and name and version of the software you are using, and the language code of the device where you installed the software. Microsoft uses this information to make the Internet-based services available to you.

- **Windows Mobile Update Feature.** The Windows Mobile Update feature provides you the ability to obtain and install software updates on your device if updates are available. You may choose not to use this feature. ike[GPS] and/or JS may not support this feature or an update for your device.
- **Windows Media Digital Rights Management.** Content owners use Windows Media digital rights management technology (WMDRM) to protect their intellectual property, including copyrights. This software and third party software use WMDRM to play and copy WMDRM-protected content. If the software fails to protect the content, content owners may ask Microsoft to revoke the software's ability to use WMDRM to play or copy protected content. Revocation does not affect other content. When you download licenses for protected content, you agree that Microsoft may include a revocation list with the licenses. Content owners may require you to upgrade WMDRM to access their content. Microsoft software that includes WMDRM will ask for your consent prior to the upgrade. If you decline an upgrade, you will not be able to access content that requires the upgrade.

b. Misuse of Internet-based Services. You may not use these services in any way that could harm them or impair anyone else's use of them. You may not use the services to try to gain unauthorized access to any service, data, account or network by any means.

5. NOTICES ABOUT THE MPEG-4 VISUAL STANDARD.

The software may include MPEG-4 visual decoding technology. This technology is a format for data compression of video information. MPEG LA, L.L.C. requires this notice:

USE OF THIS PRODUCT IN ANY MANNER THAT COMPLIES WITH THE MPEG-4 VISUAL STANDARD IS PROHIBITED, EXCEPT FOR USE DIRECTLY RELATED TO (A) DATA OR INFORMATION (i) GENERATED BY AND OBTAINED WITHOUT CHARGE FROM A CONSUMER NOT THEREBY ENGAGED IN A BUSINESS ENTERPRISE, AND (ii) FOR PERSONAL USE ONLY; AND (B) OTHER USES SPECIFICALLY AND SEPARATELY LICENSED BY MPEG LA, L.L.C.

If you have questions about the MPEG-4 visual standard, please contact MPEG LA, L.L.C., 250 Steele Street, Suite 300, Denver, CO 80206; www.mpegla.com.

6. DIGITAL CERTIFICATES.

The software uses digital certificates in X.509 format. These digital certificates are used for authentication.

7. CONNECTIVITY SOFTWARE.

Your device package may include Windows Mobile Device Center or Microsoft ActiveSync software. If it is included, then you may install and use it in accordance with the license terms that are provided with it. If no license terms are provided, then you may install and use only one (1) copy of the software on a single computer.

8. NETWORK ACCESS.

If you are using a network, such as an employer network, the network administrator may limit features or functionality on your device.

9. PRODUCT SUPPORT.

Contact ike^{GPS} for support options. Refer to the support information provided with the device.

10. LINKS TO THIRD PARTY WEBSITES.

If the software provides links to third party websites, those links are provided to you only as a convenience, and the inclusion of any link does not imply an endorsement of the third party website by Microsoft.

11. BACKUP COPY.

You may make one backup copy of the software. You may use it only to reinstall the software on the device.

12. PROOF OF LICENSE.

If you acquired the software on the device, or on a disc or other media, a genuine Certificate of Authenticity label with a genuine copy of the software identifies licensed software. To be valid, this label must be affixed to the device, or included on or in ike^{GPS} software packaging. If you receive the label separately, it is not valid. You should keep the label on the device or packaging to prove that you are licensed to use the software. To identify genuine Microsoft software, see http://www.howtotell.com.

13. TRANSFER TO A THIRD PARTY.

You may transfer the software only with the device, the Certificate of Authenticity label, and these license terms directly to a third party. Before the transfer, that party must agree that these license terms apply to the transfer and use of the software. You may not retain any copies of the software including the backup copy.

14. NOT FAULT TOLERANT.

The software is not fault tolerant. ike[GPS]/JS installed the software on the device and is responsible for how it operates on the device.

15. RESTRICTED USE.

The Microsoft software was designed for systems that do not require fail-safe performance. You may not use the Microsoft software in any device or system in which a malfunction of the software would result in foreseeable risk of injury or death to any person. This includes operation of nuclear facilities, aircraft navigation or communication systems and air traffic control.

16. NO WARRANTIES FOR THE SOFTWARE.

The software is provided "as is". You bear all risks of using it. Microsoft gives no express warranties, guarantees or conditions. Any warranties you receive regarding the device or the software do not originate from, and are not binding on, Microsoft or its affiliates. When allowed by your local laws, ike[GPS] JS and Microsoft exclude implied warranties of merchantability, fitness for a particular purpose and non-infringement.

17. LIABILITY LIMITATIONS.

You can recover from Microsoft and its affiliates only direct damages up to fifty U.S. Dollars (U.S. $50.00), or equivalent in local currency. You cannot recover any other damages, including consequential, lost profits, special, indirect or incidental damages.

This limitation applies to:

- anything related to the software, services, content (including code) on third party internet sites, or third party programs, and
- claims for breach of contract, breach of warranty, guarantee or condition, strict liability, negligence, or other tort to the extent permitted by applicable law.

It also applies even if Microsoft should have been aware of the possibility of the damages. The above limitation may not apply to you because your country may not allow the exclusion or limitation of incidental, consequential or other damages.

18. EXPORT RESTRICTIONS.

The software is subject to United States export laws and regulations. You must comply with all domestic and international export laws and regulations that apply to the software. These laws include restrictions on destinations, end users and end use. For additional information, see www.microsoft.com/exporting.

Battery Safety

WARNING! This device comes with a user replaceable lithium-ion rechargeable battery. To reduce the risk of fire or burns, do not disassemble, crush, puncture, short external contacts, or expose the battery pack to fire.

Battery warnings

Follow these additional safety guidelines:

- Use only battery packs approved for use with this device.
- Do not store or leave your device or battery pack near a heat source such as a radiator, fireplace, stove, electric heater, or other heat-generating appliance, or otherwise expose it to temperatures in excess of 140° F (60° C).
- Do not try to open the battery pack.
- Do not carry a battery pack in your pocket, purse, or other container where metal objects (such as car keys or paper clips) could short-circuit the battery pack terminals.
- Keep the battery pack contacts clean. If they get dirty, wipe them off with a soft cloth.
- Do not install the battery pack backwards so that the polarity is reversed.
- Do not connect the positive terminal and the negative terminal of the battery pack to each other with any metal object (such as wire).
- Do not solder directly onto the battery pack.
- Do not place the battery pack in direct sunshine.
- In the rare event that the battery pack leaks and fluid gets into the eye, do not rub the eye. Rinse well with water and immediately seek medical care.
- Dispose of the battery pack properly. See the section below, *Disposing of your MapSight and battery packs* for instructions.

Transportation

All MapSight batteries can be shipped by air in with respect to International Civil Aviation Organization (ICAO), Section II or International Air Transport Association (IATA), Section II packing instructions (PI) 965 (Lithium Ion batteries packed separately), 966 (Lithium Ion batteries packed with equipment), and/or 967 (Lithium Ion batteries contained in equipment) as appropriate.

When shipping your MapSight unit by air it is recommended you power off the MapSight unit, remove the battery and pack the battery safely before stowing your MapSight unit.

Disposing of your MapSight and battery packs

The lithium-ion battery packs for your MapSight are recyclable. This product must not be disposed of with local or municipal waste. It is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment.

To find the nearest battery recycling center in the USA, visit the Call2Recycle website at http://www.call2recycle.org or call 1-800-8-battery.

Hardware Warranty, Software Maintenance and Support

A copy of the Warranty Terms and Conditions applicable to your MapSight configuration is included with documentation accompanying your MapSight unit.

For more details browse to http://www.gemapsight.com/

Certifications and Classifications

Laser Classification

This device contains an eye safe Class 1 laser product. Invisible laser radiation is emitted from (and received into) the front apertures. This product complies with 'Performance Standards for Light-Emitting Products' (FDA 21CFR1040.10) and 'Safety of Laser Products' (IEC60825-1:200).

Export Control Classification Number (ECCN) Certification

ike^{GPS} self-certifies that all MapSight handheld mobile GIS data collection equipment and related accessories/software do not require permit for export and are classified under Export Control Classification Number (ECCN) EAR99.Alternatively, ike^{GPS} can be contacted for further assistance.

Harmonized Tariff Schedule (HTS) Classification

For purposes of international shipping, ike^{GPS} has determined that all of the:

- MapSight handheld mobile GIS data collection units are classified under HTS code 9015.40* being "Photogrammetrical Surveying Instruments and Appliances".
- MapSight accessory equipment and related software are classified under HTS code 9015.90* being "Parts or Accessories for Photogrammetrical Surveying Instruments and Appliances".

  * These codes have determined after consultation with HTS listings and local customs agents. Local classification may be different depending on determination by local importing customs agents

Export and Trade Restrictions

ike^{GPS} will comply with listed US Anti-Terrorism, US trade embargoes, UN Security Council sanctions, supplier-imposed restrictions and any other applicable authority trade restrictions not sell or export to countries detailed on these lists. ike^{GPS} also expects all resellers, distributors and agents of MapSight product to comply with these same restrictions.

Additional Support

In the first instance please contact your MapSight supplier with any enquiries or comments in regards to MapSight.

Alternatively, ike[GPS] can be contacted for further assistance.

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Level One, 42 Adelaide Road
Mt. Cook, Wellington 6021
New Zealand
T: +64 4 382 8064
F: +64 4 382 8250
Sales email: sales@gemapsight.com
Support email: support@gemapsight.com

Also visit our website www.gemapsight.com for the latest MapSight news, documentation, and software updates.

Appendix 2: Windows Mobile 6.1 Field PC Operations

Appendix 2: Windows Mobile 6.1 Field PC Operations

Introduction

Your MapSight integrates a Windows Mobile 6.1 Field PC (based on Juniper Archer ultra-rugged technology) with ikeGPS's MapSight camera, compass, laser distance finder and GPS instrumentation to provide a hard-wearing one stop shop for your mobile data capture needs in the most extreme environments.

The main user interface of has been optimized to allow best access to MapSight functions. This optimization has involved replacing the standard Windows Mobile 'Today' screen with a layout that allows easy access to MapSight functions that are used on a day-to-day basis and rationalizing the 'Start' menu for frequently-used MapSight-specific options. Screen images in this section will appear colored with respect to the standard 'Windows Default' theme.

While the MapSight device still retains all the Windows Mobile 6.1 functionality it is primarily designed as a data-capture device.

WARNING! **Adjusting Windows Mobile settings may affect the performance or functionality of your MapSight unit..**

This appendix provides an overview of the additional Windows Mobile Field PC functions pre-installed on the computer component of your MapSight device.

If you require further assistance on functionality that is not covered in this manual please consult the following resources:

- MapSight – The Support pages of www.gemapsight.com
- Windows Mobile – The Windows Mobile pages of www.microsoft.com

Overview of Windows Mobile 6

Your MapSight runs the Microsoft® Windows Mobile 6 operating system, designed for mobile devices. It comes with programs that manage the data capture capability and provides you with familiar Microsoft programs to help you increase your productivity and manage information effectively. For example, Microsoft Office Outlook® Mobile, similar to Microsoft Outlook®, allows you to send and receive email, keep track of contacts, manage tasks, and take simple notes.

Many Windows® applications are already compatible with Windows Mobile. You can use Windows Mobile to access Word®, Excel®, and PowerPoint® files on your mobile device, or you can use Windows Mobile® to access your email messages and contacts from your Microsoft Outlook account.

Note: *Some of the images shown in this appendix are from the default installation of Windows Mobile 6.1 operating system without MapSight OS installed. Installation of MapSight OS optimizes screen layouts and menus of this device for best use as a mobile data capture device. All standard Windows Mobile 6.1 functionality is still available, but may not necessarily be accessed directly from the methods described below.*

Using the documentation

Your MapSight unit is provided with reference tools that are primarily available from ike[GPS]. These tools include:

- This User Manual
- Optional 'MapSight Software CD' containing MapSight OS/software installers, user manuals/guides, license files and other materials specific to your MapSight purchase.
- On-device help files

Use the following chart to find the additional information you may require:

What you require	Where to find it
Instructions for setting up MapSight	This User Manual
Instructions for using external devices with your MapSight	This User Manual
Instructions for basic tasks such as replacing battery packs, resetting the device, adjusting the backlight, or inserting memory cards	This User Manual
Instructions for using programs installed on MapSight	Help files located within individual programs on MapSight
Windows® Mobile Device Center for Windows Vista/7™ users	Microsoft Website - WMDC 6.1 32-bit version for 8/7/Vista or Microsoft Website - WMDC 6.1 64-bit version for 8/7/Vista
ActiveSync® install for Windows® XP users	Microsoft Website - ActiveSync 4.5 for XP

Getting Started

This section repeats some the instructions from the 'Getting Started' section of the **Introduction** chapter.

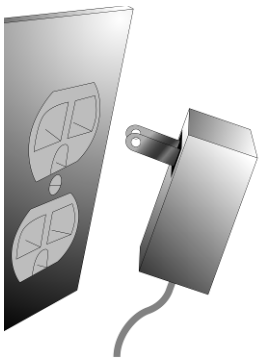
Step 1: Install the battery

1. Carefully unhook and lift up the bottom hook of the hand strap.

   WARNING! **Releasing the hand strap hook too quickly may result in injury or damage to the display. Use caution when undoing the hook or when holding your MapSight by its hand strap.**

2. Press on the battery door and slide the door latch to the right to unlock it, as shown in the second picture.
3. Remove the battery door.
4. Insert the battery pack so battery contacts match up.
5. Insert the tabs on the bottom of the battery door into the case slots. Close the battery door.
6. Press on the battery door. Slide the latch to the left to lock it.
7. Reattach the hand strap.

Step 2: Charge the battery



1. Ensure the appropriate country adaptor is fitted to the power pack
2. Mount the plug onto the wall charger (if it is not already assembled).
3. Plug the wall charger into an outlet.
4. Plug the other end of the wall charger into the DC jack on your MapSight. The device turns on after a few seconds, and a flashing red light signals the device is charging.
5. Charging MapSight for 4 hours charges it to around 95%.
6. Let the device charge for 6 hours to get a full charge.

Note: *If your MapSight suspends and the flashing red LED turns off, the device keeps charging.*

Charging temperatures: Only charge your battery pack in temperatures between 32°F and 104°F (0°C and 40°C). For best results, charge the battery pack at room temperature (68°F or 20°C).

Step 3: Establish basic settings on the device

Using the stylus, follow the instructions on the screen to calibrate the device and establish basic settings.

We recommend creating a name for your MapSight so external devices like desktop computers or devices that use Bluetooth® technology can differentiate your MapSight from other devices more easily.

To create a name, follow these steps:

1. Tap *Start* > *Settings*.
2. From the *System* tab, tap *About*
3. Select the *Device ID* tab at the bottom of the screen.
4. Type in a device name. We recommend using "SN" (serial number) and the device serial number, which can be found by tapping *Start* > *Settings* > *System* and choosing *System Configuration*. An example of a device name appears below.

Step 4: Connecting to a desktop computer

Important: Read the following paragraph before moving connecting to a desktop computer.

- If you have Microsoft Windows® Vista/7™/8™, you already have basic file synchronization capability with your desktop computer without installing any additional software. You can skip Steps 4 and 5. It is recommended that the latest version of Microsoft Windows Mobile Device Center be installed to enable full data transfer facilities between your Windows (32-bit or 64-bit) desktop operating system and the Windows Mobile software installed on your MapSight unit.
  Windows 8 users will also need to ensure that enable .NET Framework 3.5 from the Control Panel "Turn Windows features on or off" options.
  To access these basic sync options, connect your MapSight to the desktop computer using a USB cable. For full synchronization support such as Microsoft Outlook® contacts, email, calendar, notes, and tasks, download and install Windows Mobile Device Center through Windows Update on the Start menu of your desktop computer.
- If you have Windows® 2000 or Windows® XP, Windows Mobile® 6 requires that you use Microsoft ActiveSync 4.1 or greater to connect to your desktop computer. ActiveSync 4.5 is available from the Microsoft website at http://www.microsoft.com/download/en/details.aspx?id=15. Follow the next steps to install Microsoft® ActiveSync®, which allows you to install programs onto your device using a desktop computer.

  1. Ensure Microsoft ActiveSync 4.5 is installed on your Windows XP desktop
  2. Select your language.
  3. If ActiveSync 4.5 or greater has not been installed on your desktop computer, follow the directions on the screen to install it.

Synchronization Setup Wizard
Welcome to the Pocket PC Sync Setup Wizard
To set up a sync partnership between this computer and your Pocket PC, click Next.
If you click Cancel, you can still:
Copy and move files between your Pocket PC and this computer
Add and remove programs on your Pocket PC
< Back
Next >
Cancel

Note: *Install ActiveSync before attaching the USB cable to the desktop or MapSight.*

Step 5: Creating a connection to a desktop computer

1. Plug USB Client end (mini B) of the USB communications cable into the USB 'B' port of your MapSight unit.
2. Plug the USB Host end (full size A) of the USB communications cable into a USB 2.0 or 1.0 port of your desktop/laptop computer.
3. Establish an Windows Mobile Device Center/ActiveSync partnership by following the instructions on the desktop computer screen.

Note: *The first time the MapSight unit is connected, Windows may take some time to identify the new device, then download and install any necessary drivers before a connection to the MapSight unit is made.*

You are now ready to use your MapSight.

Using the Hardware

This section teaches you how to use the hardware components of MapSight. Specifically, you learn how to:

- Identify button functions
- Customize button functions
- Use buttons to suspend, power off, and reset the device
- Use the stylus
- Use the touchscreen
- Replace the battery pack
- Understand LED signals
- Use peripheral devices (SD cards and USB drives) with the device

Identifying button functions

The following chart shows you the names and functions of each button on the keyboard.

Button	Name	Function
	Start menu button	Provides a menu of applications.
	Task Manager button	Lets you switch between or close running applications; allows you to view memory allocations.
	Home button	Returns you to the Today screen.
	Context menu button	Displays the context menu for the item selected (similar to a right-click on desktop a computer).
	Enter button	Enters the selected soft key or option.
	Power button	Turns MapSight on and off, resets, suspends. (See more details in the Power button functions section.)
	Four-way directional button	Allows you to navigate.

When MapSight applications are running, the standard Windows Mobile button functions may be reassigned for MapSight application use. Please refer to the MapSight application instruction for button use.

Customizing button functions

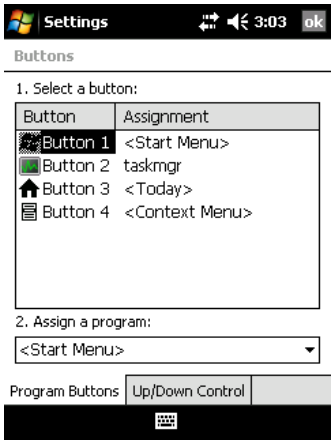
Each button performs a specific function. You may customize the function of the following four buttons to open programs or perform shortcuts:

- Start menu button
- Task Manager button
- Home button
- Context menu button

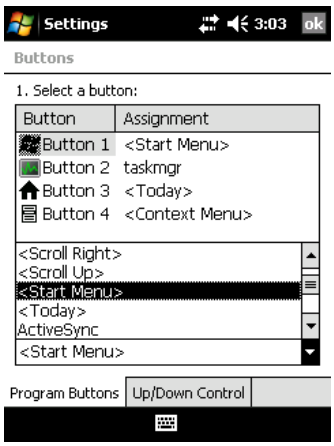
Note: *The functions assigned to the Enter button, Power button, and Four-way directional button cannot be customized.*

To reassign a program or shortcut to a button, follow these steps:

1. Tap *Start* > *Settings* > *Personal* tab > *Buttons*. A list of buttons and their current assignments is displayed on the Program Buttons tab
2. Tap the button you want to reassign, as shown here.



3. In the *Assign a program* box, tap the program or shortcut you want to assign to the button. In the example here, the user has selected Start Menu.
4. Tap OK



WARNING! **Please be aware that customization of standard buttons may impact on MapSight application functionality.**

Suspending, powering off, resetting, and restoring factory defaults

The Power button allows you to suspend, power off, or reset the device. A series of keyboard actions also lets you restore the hard drive, settings, and icons to their original factory defaults. Below are instructions for each action.

Suspending the device: Suspending MapSight is different from powering it off:

- Suspending the device puts it to sleep, and when it is turned back on, the device remembers where it was. Some battery power is used.
- Powering off the device closes all programs and turns off all of the power. No battery power is used.

We recommend suspending your device if you plan to turn it off for less than two weeks.

To suspend your device, press the Power button briefly and release. To resume the device from suspend mode, press the Power button again.

Note: *If you suspend the device while it is charging, the flashing red light disappears. However, the device continues to charge.*

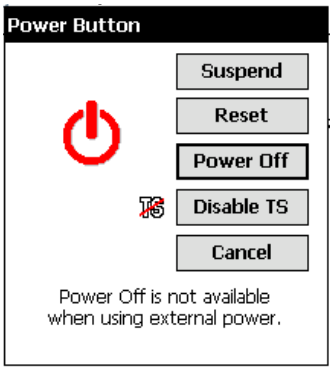
Powering off MapSight: Powering off the device ends all programs and removes power from all system components except for the real-time clock. Unlike suspend mode, the device resets when it is powered on again.

To preserve battery power, we recommend you power off the device if it will be left unused for two weeks or longer.

To power off MapSight:

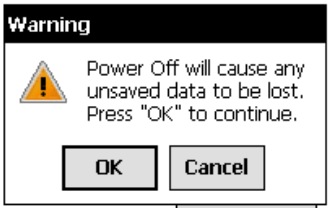
1. Save your open files and close any running programs.
2. Press and hold the Power button until the Power Button menu appears, then release the Power button.

   Note: *The device cannot be powered off while it is plugged into the wall charger.*



3. Tap on-screen the [Power Off] button. A warning dialog appears, as shown in the second picture. Tap *OK*.

   Note: *The keyboard backlight stays on for a few seconds after the device shuts off. The device cannot be powered back on until the keyboard backlight turns off.*



To power on your MapSight, hold down the Power button until you see the green notification light appear.

Resetting the device: Some programs require you to reset your device during the installation process. Follow the steps below to reset MapSight:

1. Save your open files and close any running programs. (For instructions on backing up files, see the *Backing up data* section)
2. Press and hold the Power button until the Power Button menu appears, then release the Power button.
3. Tap the on-screen [Reset] button to perform a soft reset.

If your device locks up, you can reset the device by pressing and holding the Power button for 10 seconds or until the screen goes dark. After a few seconds, if there is sufficient charge in the battery, the device will reset and turn on again.

Restoring the device to its factory state: Follow the steps below to restore the user storage, settings, and icons on your MapSight to their original factory defaults.

WARNING! **Restoring MapSight to its original factory state will permanently erase data saved on, any software you installed, and any changes you made to MapSight, including settings changes. Following this operation, you will need to reinstall MapSight OS from the MapSight Software and any other CDs provided.**

Option A: MapSight OS Zeroize Utility

- Select Start > MapSight Utilities > Zeroize.
- Check the *Zero Storage Card* option if desired, then Confirm or Cancel the operation.

WARNING! **Selecting the *Zero Storage Card* option will cause all data in the \Storage folder and on any fitted SD Card to be permanently deleted. Only select this option if you intentionally wish to destroy all data in the \Storage folder and on the SD Card.**

CAUTION: Using the ***Zero Storage Card*** **on larger capacity SD/SDHC cards may take some time to process and can potentially corrupt the card if interrupted. If you need to clear content of larger capacity SD Cards, we recommend removing the card and deleting/reformatting via a SD Card reader attached to you desktop PC**.

Note: *More information on the Zeroize utility is provided in the 'MapSight Utilities' chapter.*

Option B: Hardware Restore

- Reset the device from the power button menu or by holding down the power button until the display goes dark.
- When the green notification LED light appears on the front of your MapSight, simultaneously press and hold the following buttons for several seconds:
  - Clean Boot: Home, up arrow, Context
  - Clean Storage: Task, up arrow, Return
  - Clean Registry: Start, Context
  - Clean All: Return, left arrow, Context
- Hold the buttons until the progress bar reaches the second tick mark and then disappears. Factory settings are restored automatically.

Using the stylus

The stylus is attached to your MapSight.

Like the left button on a desktop computer mouse, the stylus is a tool that lets you select or deselect items and enter data. Like the right button, the stylus lets you perform shortcuts like cutting and pasting.

Instructions for these tasks are listed in the table below.

To do this...	Follow these steps
Select an item	Tap once.
Enter data	See Entering Information, a section in the next section about data entry options.
Open an item or file	Tap the item or file.
Cut or copy	Tap and hold until the context menu appears. Select *Cut* or *Copy*.
Paste	Tap and hold the area where you want to paste. Select *Paste* from the context menu that appears.
Open a context menu for an item	Tap and hold the item. The context menu appears.
Drag and drop	Tap and drag the item to the destination. Lift up the stylus.
Select multiple items	Drag the stylus over the items.

For instructions on using the transcriber program on your MapSight, see the *Entering Information* section.

Using the touchscreen

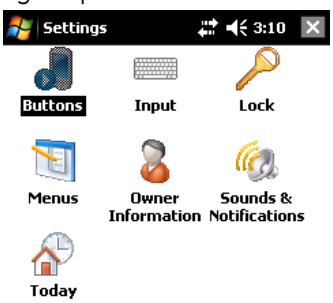
This section explains how to protect, clean, and calibrate the touchscreen.

Protecting and cleaning the touchscreen. The touchscreen is sealed to protect your device against water and dust. To protect your touchscreen, we recommend that you apply a touchscreen protector to the screen. For instructions about applying a touchscreen protector or cleaning your touchscreen, refer to the *Caring for your MapSight* section.

CAUTION: **Be sure to replace the screen protector as often as the screen protector packaging recommends.**

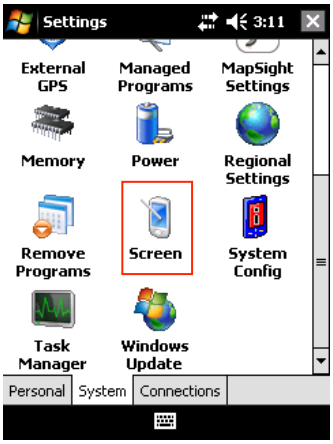
Calibrating the touchscreen: If the touchscreen is not responding accurately to stylus taps, try calibrating the touchscreen manually using the following steps:

Tap *Start* > *Settings*. The Settings window appears, as shown here.



Select the System tab at the bottom of the display.

Scroll down and tap on the *Screen* icon, shown at right.



When the Screen window appears, tap *Align* Screen.

Follow the directions on the display to calibrate the touchscreen.

After you calibrate the touchscreen, the Screen window appears again. Tap *OK* to exit the screen.

Understanding LED signals

MapSight signals events and processes using a charge LED and a notification LED.

Charge LED: This red light appears to the left of the Start menu button. A flashing light signals that the battery is currently charging; a solid light signals that the wall charger is connected but that the battery is fully charged.

Note: *When the device is suspended or powered off, the charge LED does not appear.*

Notification LED: Appearing on the right side of the Enter button, the green notification LED appears briefly when you power on the unit after the device is reset or restored to factory defaults.

Replacing the battery pack

To replace the battery pack, follow these steps:

1. Close all running programs.
2. Suspend the device.
3. Remove the power cable if connected.

CAUTION: The device only stays on for about five seconds without a power source. Always suspend your device before replacing the battery pack.

Carefully unhook and lift up the bottom hand strap hook.

CAUTION: Releasing the hand strap hook too quickly may result in injury or damage to

the display. Use caution when undoing the hook or when holding your MapSight by its hand strap.

1. Press on the battery door about 1/4" beneath the door latch and slide the door latch to the right.
2. Remove the battery door.

   Note: *The door may make a noise while it is being removed, caused by the door scraping against the battery.* The sound is normal; no damage is done when you hear this sound.
3. Remove the old battery pack.
4. Make sure the battery contacts of the charged battery pack are clean and dry.
5. Insert the charged battery pack, lining up the battery contacts with your MapSight contacts.
6. Insert the tabs on the bottom of the battery door into the case slots.
7. Close the battery door, making sure the door latch is in the unlock position as the door meets the case.
8. With the door latch in the unlock position, press on the battery door just below the door latch and slide the latch to the left to lock it.
9. Reattach the hand strap.

Note: *If you remove the battery pack from your device and the device is still attached to the wall charger, the battery icon still appears on the display. When the battery is replaced, charging resumes.*

For instructions on installing or charging a battery pack, see *Getting Started*. For instructions on maintaining and caring for your battery pack, see *Caring for your MapSight*.

Using peripheral devices such as SD cards and USB flash drives

MapSight accepts several peripheral devices. The USB Host (mini A) accepts devices like USB flash drives and keyboards; the Secure Digital (SD) card slot accepts SD/SDHC memory cards.

Note: *Your MapSight has integrated Bluetooth® technology; see later sections of this manual for more details about using Bluetooth® peripheral devices with MapSight.*

This section explains how to:

- Install and operate USB accessories on your MapSight
- Install its SD card
- Replace its SD card
- Copy files from a SD memory card or USB drive

Installing and operating USB devices on MapSight. The USB Host accepts several USB devices, including keyboards and USB flash drives.

Note: *To be compatible with Windows Mobile® 6, some USB serial devices require drivers. Refer to your USB device's manual or contact the manufacturer to determine compatibility.*

To install a USB device, plug the mini end of a USB communications cable into the USB Host (labeled A on your device). You may need to use a USB mini-to-full size adapter.

Installing an SD card: To operate a SD card, insert the card into the SD card slot (located above the screen under the SD card cover) on your MapSight. If the card has been correctly formatted, the system will automatically detect and add the card to the list of available storage media.

Reinserting or changing an SD card. Whenever you remove or change an SD card on your MapSight, wait at least 6 seconds before inserting another card into the slot. Your MapSight

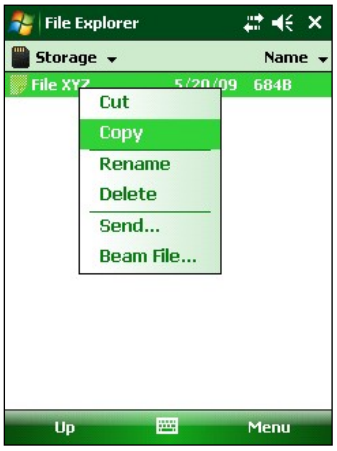
needs this short time delay to properly identify and use the newly inserted card. If a card is re-inserted too quickly, your MapSight may need to reset. To avoid this problem, close all programs before changing or re-inserting a card.

Copying data from an SD card or USB drive. You can run or copy data from a peripheral device onto your MapSight by following these steps:

On your MapSight, tap *Start* > *Programs* > *File Explorer*

Tap and hold the file you want to copy to your MapSight. A pop-up menu appears, as shown here.

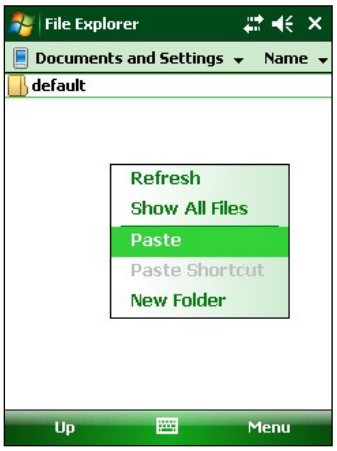
Note: *If you want to copy multiple files, tap and drag the stylus over the files. Once the files are selected, tap and hold the stylus on the files until a pop-up menu appears.*



Select Copy

Open the destination folder where you want to place your copied file

Tap and hold the stylus on the white space below the existing files until the pop-up menu appears again



Select Paste. The file is copied and its name appears on the screen

Using MapSight as a Field PC

Focusing on the interface elements of your MapSight as a standard field computer, this section describes how to:

- Understand the Today screen (the default display screen)
- Use the Start menu
- Enter information with the stylus
- Recognize status icons
- Recognize soft keys
- Change settings
- Rotate the screen
- Dim or turn off the backlight to save battery power
- Adjust the backlight timer

Understanding the Today screen

The Today screen is the default screen you see when MapSight powers on. From the Today screen you can view or select

- Today's date
- Owner information
- Messages
- Tasks
- Upcoming appointments

The Today screen also allows you to lock or unlock your device. Locking the device disables your screen for easy cleaning.

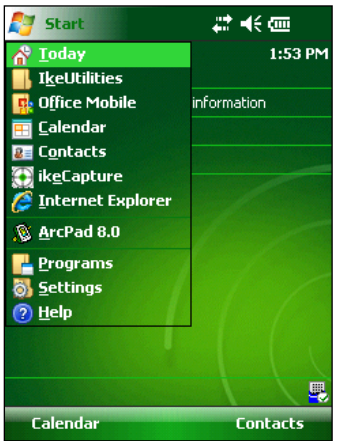
Go to *Start* > *Settings* > *Today* > *Items* tab and select *Device Lock* to have the option appear on the Today screen.

To lock the device, simply tap on the words "Device unlocked." To unlock the device, tap on the word "Unlock" on the two screens that appear.

Using the Start menu

The Start menu is the main access point to all programs in Windows Mobile®. It allows you to access files, programs, or system settings.

To access the Start menu, tap the Start menu icon in the top left corner of your screen or press the Start menu button on the keypad. The Start menu appears, giving you links to programs, settings, and menus.



Note: *For a description of each item on the Start menu, see Getting to Know Programs and Settings.*

Entering information

At the bottom of the display is a data entry icon.

Tapping on the icon allows you to enter information using the stylus. Specifically, you can choose to:

- Select alphanumeric characters from the on-screen Keyboard utility (the default input method).
- Use *Letter Recognizer*. This input method recognizes character strokes and gestures.
- Enter text using *Block Recognizer*. This utility recognizes letters from single strokes.
- Use *Transcriber*, a program that allows you to enter data using cursive, print, or mixed handwriting.

Note: *For more details about using each input method, go to* Start > Settings > Input *and choose the input method from the Input window.*

When you are ready to enter text, you can switch from the default input method (keyboard) by following these steps:

1. On the bottom center of the screen, tap the arrow next to the input method icon. If the input selector arrow is not displayed, tap the input method icon.
2. The input method menu appears, as shown here. Tap the input method you want from the list of options.

Using the selected input method, enter your text.

Recognizing status icons

Status icons show the status of operations on your MapSight. Status icons and their functions are listed in the following chart.

Icon	Name	Function
	Charge indicator	Tells you when the device is charging.
	Speaker	Tap to control volume.
	Battery capacity	Tap to see how much battery power remains.
	Task Manager	Tap to switch or close running programs.

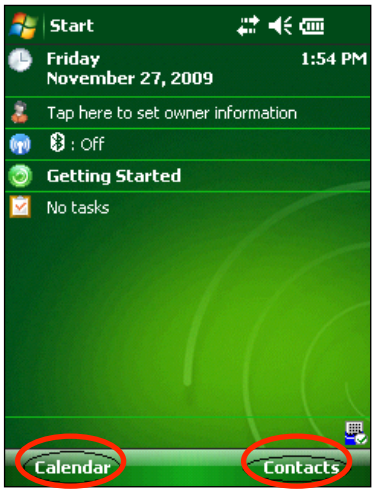
For an additional list of icons and their functions, follow these steps:

1. Tap Start > Help > Contents.
2. Select Start Using Your Device screen.
3. Tap on the "What do those icons mean?" item.

Recognizing soft keys

These context-sensitive keys appear as words, buttons, or tabs on the menu bar. Tap on these keys to perform actions or open menus.

Here you see soft keys on the Today screen.

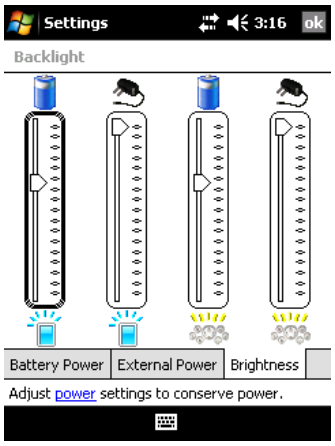


Dimming or turning off the backlight

Dimming or turning off the display backlight saves battery power when the device is running on a battery pack. To dim or turn off the backlight, follow these steps:

1. Tap Start > Settings > System tab > Brightness.
2. Select the Battery Power tab if it is not already selected. The Brightness window for battery power appears, shown here.

Drag the backlight slider slightly to the left to dim the backlight. Drag the slider all the way to the left to turn the backlight off.

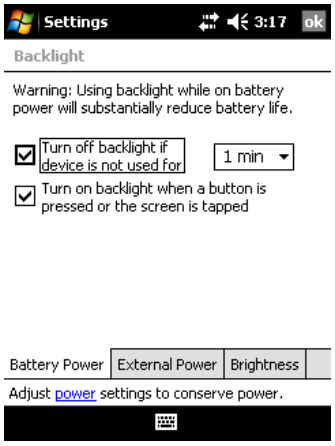


Adjusting the backlight timer

By default, the display and keypad backlights are set to turn off after one minute of inactivity. To adjust the time when your backlight turns off, follow these steps:

Tap *Start* > *Settings* > *System* tab > *Backlight*. The Backlight window appears. To change the timer for external power, tap the External Power tab.

1. Select or deselect the two options.
2. If you selected the first checkbox, choose the length of time before the backlight turns off


Settings
3:17
ok
Backlight
Warning: Using backlight while on battery power will substantially reduce battery life.
Turn off backlight if device is not used for
1 min
Turn on backlight when a button is pressed or the screen is tapped
Battery Power
External Power
Brightness
Adjust power settings to conserve power.

Performing Common Tasks on MapSight

This section teaches you how to perform the following common tasks:

- Power Settings
- Explore files
- Close programs that are running
- Switch between running programs
- Change settings
- Use on-device help
- Back up data
- Copy files from peripheral devices

Power Settings

Suspending the device

Suspending your MapSight is different from powering it off. During suspend mode, the device sleeps but remembers where it was when it is turned on again; when you power off your MapSight, it does a basic reset. We recommend suspending your device if you want to resume your task or if you plan to use the device on a daily basis.

To suspend your device, press the power button briefly and release. To resume the device, press the power button again briefly.

Note: *If you suspend the device while it is charging, the flashing charge LED disappears. However, the device continues to charge.*

Powering off MapSight

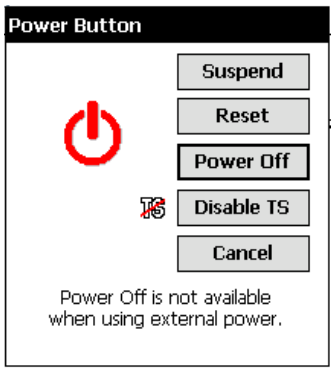
Powering off the device ends all programs and removes power from all system components except for the real-time clock. Powering off your device saves power without draining the battery.

We recommend powering off the mobile device if it will be inactive for more than one week.

To power off your MapSight, follow these steps:

Save and close all applications. (For instructions on backing up your files, see the section called *Backing up data*.)

Press the Power button until the Power Button menu appears, as shown here.



Tap *Power Off*, then *OK*.

Note: *The keyboard backlight stays on for a few seconds after the device shuts off. Until the keyboard backlight turns off, the device cannot be powered on again.*

To power on the device, hold the power button until the green notification LED appears. The device is now booting. This process takes about a minute.

Resetting the device

Some programs require you to reset your device when you install them. Follow the steps below to reset MapSight:

1. Back up your files and close any open applications. (For instructions on backing up files, see 'Backing up data'.)
2. Press the power button until the power button menu appears.
3. Choose Reset.

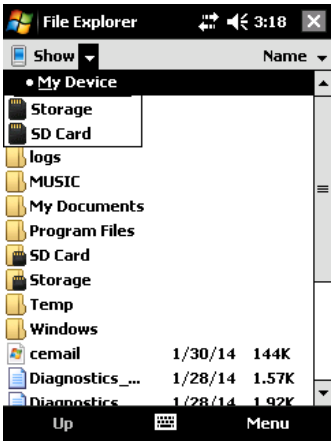
Note: *If your device locks up, you can reset the device by pressing the power button for 10 seconds or until the screen goes dark. The device resets itself automatically after a few seconds.*

Exploring files

To explore files stored on your MapSight, follow these steps:

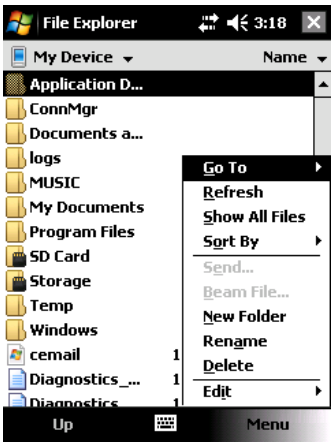
Tap *Start* > *Programs* > *File Explorer*. The File Explore window appears.

If the drive you want does not already appear, tap on the drop-down menu arrow to select it, as shown here.



Navigate the file directory by tapping on the folders and files you want. If you want to go up a level, tap on the Up soft key at the bottom of the screen.

Use the Menu soft key at the bottom of the screen to manipulate files.



Closing running programs

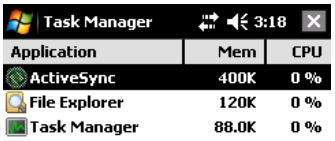
Closing programs that are not being used frees memory and allows the device to run faster. We recommend closing any programs you are not using.

Note: *In many cases, tapping on the [x] in the top right corner of a program only minimizes the program; the program continues to run in the background.*

To close one or more running programs, follow these steps.

Press the Task Manager button.

The screen at the right appears.



Select the program(s) you want to close

Tap End Task.

Switching between running programs

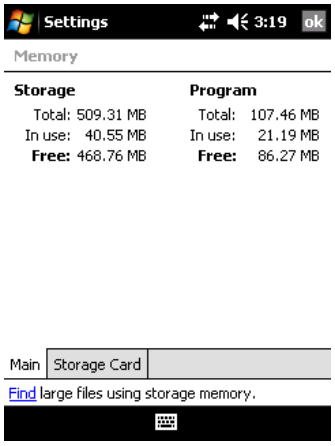
To switch between programs running on your MapSight, follow these steps:

1. Press the Task Manager button.
2. Tap and hold program you want to switch to.
3. Tap *Activate* from the popup menu. The program comes to the forefront.

Viewing memory allocation for programs

To see how much memory is available for programs and storage on your MapSight follow these steps:

Tap *Start* > *Settings* > *System* > *Memory*. A new window appears as shown in the following image

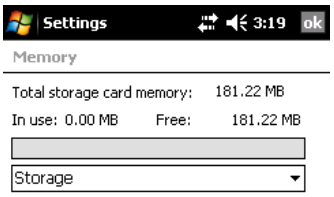


The 'Main' tab displays the amount of memory the Windows Mobile operating system has automatically allocated to file and data **Storage** versus **Program** storage.

This tab also displays the 'Total:' amount of memory, the amount 'In use:' and the remaining available 'Free:' memory."

The Storage Card tab displays how much memory is available in the allocated 'Storage' folder and on any storage card that is inserted into the MapSight unit.

By default the list box will show how the status of the 'Storage' folder



If a SD card is fitted, tap the drop-down list and then select the 'Storage Card' name whose information you want to view.

Changing settings

To change settings on your device, follow these steps:

1. Tap *Start* > *Settings*. The Settings window appears.
2. Choose one of the tabs at the bottom of the screen.
3. Tap on the setting you want to change.
4. Adjust the setting controls.

Using on-device help

You can access electronic help files on your MapSight from each screen. Windows Mobile® provides help information that is context-sensitive; the help information that appears on the help screen is directly related to what you are doing on the device.

To access help files, follow these steps:

1. Tap Start > Help.
2. Select an option from the help menu that appears.

Note: *If the topic you want is not listed, try one of these options:*

- **Option 1**: Choose Contents at the bottom of the screen. A table of contents appears. Tap on the item you want.
- **Option 2:** Choose Search at the bottom of the screen. Search allows you to search for specific topics within boundaries you set.
- **Option 3:** If you want help about a certain program on your mobile device, open the program first, then tap *Start* > *Help*. The help menu items that appear are directly related to the application program.

Note: *If you need more assistance than a help file provides, visit Microsoft's website or see Troubleshooting and Service Tips*

Backing up data

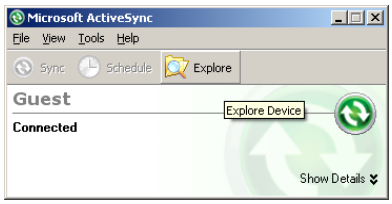
Your MapSight is designed to protect your data. However, it is still a good idea to back up your data regularly by saving information to a desktop computer or to a Secure Digital (SD) card.

Backing up to a desktop computer: To copy files from your MapSight to a desktop computer, follow these steps:

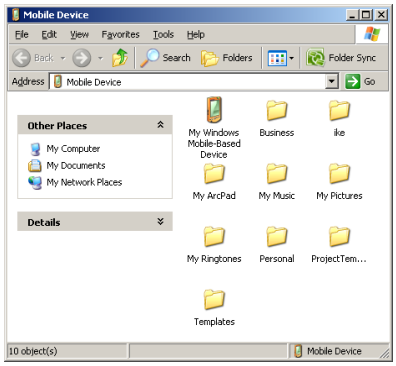
If you have Windows® 2000 or Windows® XP, re-establish an ActiveSync® connection and continue with Steps 2-6.

Note: *If you have Microsoft® Windows Vista/7™, we recommend installing Windows Mobile Device Center™ on your desktop computer from the Microsoft website or by selecting Start > Programs > Microsoft Update on your desktop computer. You can then sync your MapSight with your desktop computer. For more instructions about using Windows Vista/7™, visit Microsoft's website.*

In the ActiveSync window on your desktop computer, click the [Explore] button on the toolbar. Alternatively the 'Explore Device' option can be found from the 'Tools' menu



A new File Explorer window will open, showing the file directory for MapSight 'Mobile Device'.



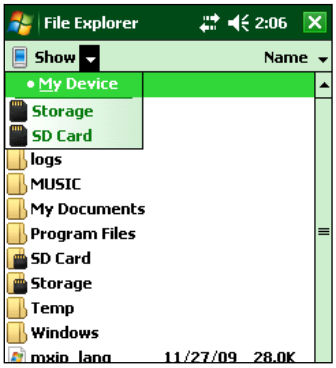
Select the files on MapSight you want to copy.

Copy the files by choosing Edit > Copy or by right-clicking and choosing Copy.

Paste the files onto the desktop computer.

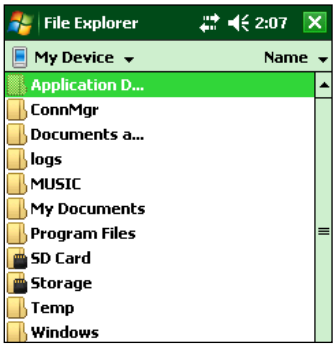
Backing up to an SD card: To save information to a card, follow these steps:

Select *File Explorer* from the Start menu. The File Explore window appears.

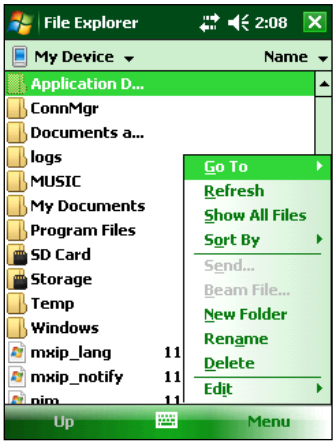


If *My device* does not already appear as the current directory, tap on the arrow next to the directory that appears, as shown in this image. When a dropdown menu appears, select My device.

A list of files appears. Highlight the files you want to back up and tap on *Menu* in the lower part of the display. A menu of options appears.



Tap and hold the stylus on the *Edit* option, as shown here

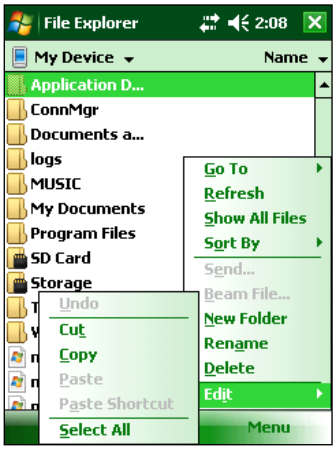


Choose *Copy* from the menu that appears.

Select the SD card from the file directory.

To paste the files from your MapSight to the SD card, tap the *Menu* soft key and choose *Edit > Paste*.

You can now remove the card.



Copying data from a peripheral device

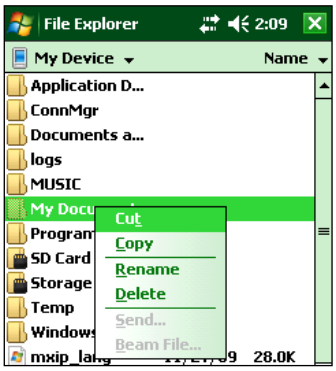
You can copy data from an SD card, or USB flash drive onto your MapSight by following these steps:

On your MapSight, tap Start > Programs > File Explorer.

Tap and hold the file you want to copy to your MapSight. A pop-up menu appears, as shown here.

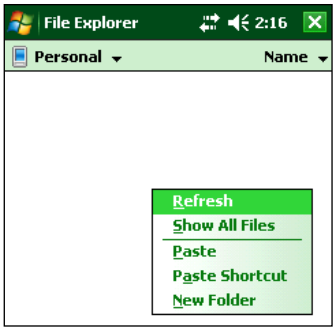
Note: *If you want to copy multiple files, tap and drag the stylus over the files. Once the files are selected, tap and hold the stylus on the files until a pop-up menu appears.*

Select Copy from the pop-up menu

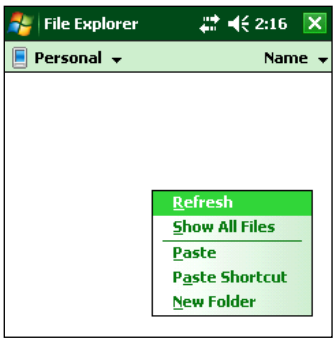


Open the destination folder where you want to place your file. (To copy the file to the device drive, select My device.)

Tap and hold the stylus on the white space below the list of existing files until a pop-up menu appears.



Select *Paste*. The copied file appears in the folder.



Communicating with a Desktop Computer

Earlier, you learned how to create an ActiveSync partnership between your MapSight and your desktop computer. In this section, learn how to—

- Install ActiveSync on a desktop computer
- Create an ActiveSync connection
- Install Windows Mobile Device Center on a desktop computer
- Create a Windows Mobile Device center connection

Install ActiveSync on a desktop computer (Windows 2000 and Windows XP)

Note: *If you have Windows Vista/7™, see Install Windows Mobile Device Center.*

1. Download and run the ActiveSync 4.5 from ActiveSync 4.5.
2. Follow the directions on the screen to install Windows ActiveSync 4.5.

Note: *Install ActiveSync before attaching the USB cable to the desktop or MapSight.*

Creating an ActiveSync Connection

1. Plug USB Client end (mini B) of the USB communications cable into your MapSight.
2. Plug the USB Host end (full size A) of the USB communications cable into your desktop computer.
3. Establish an ActiveSync partnership by following the instructions on the desktop computer screen.

Install Windows Mobile Device Center on a Desktop Computer (Windows Vista/7™)

To install the Windows Mobile Device Center on a desktop computer with Windows Vista/7™ complete the following steps:

1. Connect your device to your desktop computer.
2. Download the Windows Mobile Device Center Installer to your computer by clicking on the download link that appears in the pop-up window.
3. Select "Run this program from its current location and click OK.
4. Follow the instructions on the screen.

Creating a Windows Mobile Device Center Connection

Once Windows Mobile Device Center has been installed, create a connection at any time by plugging one end of a USB cable into the computer and the other end into your MapSight. Windows Mobile Device Center automatically opens. Follow the steps on the screen.

Note: *For more information about connecting to a computer using either ActiveSync or Windows Mobile Device center visit the Microsoft Windows Mobile website.*

Getting to Know Programs and Settings

This section describes

- Programs and utilities on the Start menu
- Applications on the Programs menu
- Programs available on the Getting Started Disc
- How to find settings on MapSight

Understanding Start menu programs and utilities

The Start menu is the main access point to all programs in Windows Mobile. It allows you to access files, programs, or system settings.

To access the Start menu, tap the Start flag icon or press the Start menu button on the keypad. The Start menu appears, shown at right. A description of each Start menu option follows.

Note that some of these options may not display due to the version of MapSight OS installed on the MapSight unit.

- **Today/Home screen.** The default display of MapSight.
  The Today/Home screen and Start menu may differ depending on MapSight OS release.
- **MapSight Utilities.** Access to links to diagnostic and system utilities for the MapSight functions.
- **File Explorer.** Windows Mobile file explorer.
- **MapSight.** Access to the MapSight data capture application.
- **Recent programs.** If a program has been recently run, it is listed on the Start menu. Tap on the program name to open the application.
- **Programs.** Tapping on Programs opens the Programs menu window. The Programs menu allows you to view and access any installed programs. For more details about Programs, see the next section, Programs Menu Options.
- **Settings.** Options for settings are divided between three main menus:
  - Personal settings
  - System settings
  - Connections settings

  Note: *For more details about Settings, see the section called Finding Settings. To change your settings, see Using MapSight as a Field PC.*
- **Help.** On-device help files are context-sensitive; the help information that appears on the help screen is directly related to what you are doing on the device.

  Note: *For more instructions on using help, see Performing Common Tasks.*

Understanding applications in the Programs menu

The Programs menu lists applications installed on your MapSight. To access the Programs menu, tap *Start* > *Programs*. Applications in the Programs menu are described below in the order they appear.

For on-device help instructions on how to use a program or for a more detailed description of a program, follow these steps:

1. Open the program.
2. Tap *Start* > *Help*.

For more detailed instructions about using on-device help, see the section called *Using on-device help*.

The default applications in the Programs menu comprise the following:

Games	Windows Mobile Games - Bubble Breaker or Solitaire
ActiveSync	Use this to synchronize your MapSight with a desktop or laptop computer. If required, you can also use ActiveSync to explore your MapSight and synchronize your contact information, calendar information, emails, and more.
Calculator	This program simulates a calculator.
File Explorer	This utility lets you view your MapSight directory folders so you can locate files.
Getting Started	Window Mobile shortcuts to common first-use setup activities.
Internet Sharing	Internet Sharing on lets you utilize your Windows Mobile device as a data modem
Messaging	This program gives access to connected Email accounts.
Messenger	This program gives you quick access to your Windows Live® Inbox and Messenger account.
Notes	This function allows you to record quick Notes and attach audio recordings
Pictures and Videos	This viewer allows you to thumbnail preview pictures or videos in a specified folder without opening it.
Remote Desktop Mobile	Allows the user of the device to interact with a remote PC (running Windows XP or Vista/7™).
Search	The search function helps you find files or programs.
Task Manager	Use this application to list currently running programs
Tasks	Use this application to enter new tasks or to view and modify existing
Toggle TS	Tap this icon to toggle the touch screen on and off. When the touch screen is turned off, navigate by using the directional buttons and shortcut buttons. Toggle TS can be applied to a button for easy access.
Windows Live	This program gives you Windows Live® Inbox account.
Windows Media	This program gives access to your entertainment files.

Icons for additional programs you install on your MapSight unit may appear on the Programs screen.

Finding settings

To locate settings, tap *Start* > *Settings*. The Settings window appears, showing three menu tabs: *Personal*, *System*, and *Connections*. Use the following chart to identify the location of specific settings.

Icon	Tab		
Setting	Personal	System	Connections
About		✓	
Backlight		✓	
Beam			✓
Bluetooth			✓
Buttons	✓		
Certificates		✓	
Clock and Alarms		✓	
Connections			✓
Customer Feedback		✓	
Domain Enroll			✓
Encryption *		✓	
Error Reporting		✓	
External GPS		✓	
MapSight Settings		✓	
Input	✓		
Lock	✓		
Managed Programs		✓	
Memory		✓	
Menus	✓		
Network cards			✓
Owner Information	✓		
Power		✓	
Regional Settings		✓	
Remove Programs		✓	
Screen		✓	
Sounds and notifications	✓		
System Config		✓	
Task Manager		✓	
Today	✓		
USB to PC			✓
Windows Update		✓	
Wireless Manager			✓

WARNING! **Use of Microsoft Windows Mobile Encryption will result in data stored on SD cards becoming incompatible for use in other devices. It is strongly recommended that Encryption is not enabled on your MapSight device to avoid data loss.**

Please note some of these options are only available when the MapSight OS is installed on your MapSight unit.

For instructions on changing settings, see the on-device help.

Using the Integrated Bluetooth® Option

This section explains what you need to know about using integrated *Bluetooth* wireless technology with your MapSight. Learn how to—

- Identify the power status of Bluetooth
- Make MapSight discoverable to other devices that use Bluetooth
- Determine the status of Bluetooth
- Create a Bluetooth partnership
- Set up an outgoing Bluetooth virtual COM port
- Specify a COM port within an application
- Set up an incoming Bluetooth virtual COM port

Bluetooth drivers and profiles

Microsoft Bluetooth drivers are loaded as part of the Windows Mobile package.

These drivers support the following profiles: serial devices, ActiveSync, object exchange (OBEX), dial-up networking, and human interface devices (e.g., keyboard or mouse).

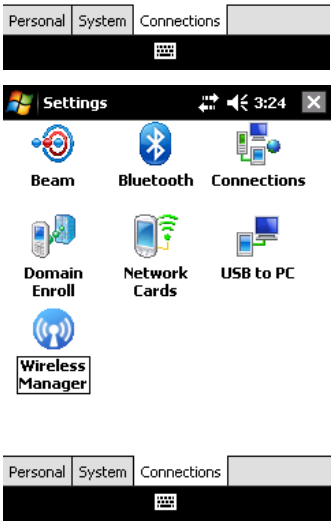
Profiles not supported include network access point and audio.

Supported profiles are described in the next section.

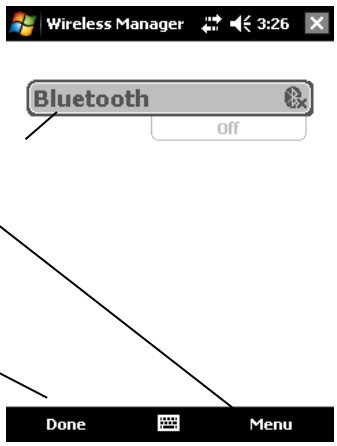
Identify the status of Bluetooth using Wireless Manager

Access to the Wireless Manager is via the Connection options. Tap Start > Settings then the 'Connection Tab'

Tap the Wireless Manager icon to

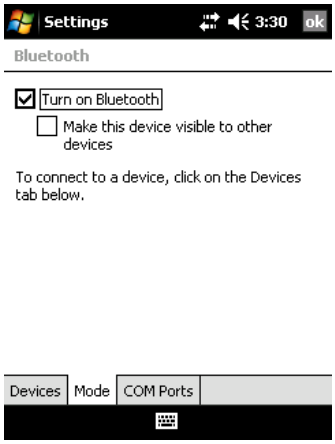


The default screen in Wireless Manager shows the power status, the Done soft key, and the Menu soft key (see the following figure).



The Bluetooth bar acts as a toggle switch, allowing you turn the device Off or On easily. If you make the device visible to other devices, the toggle switches between *Off* and *Visible*. Tapping on the *Done* soft key closes the Wireless Manager screen.

Tapping on the *Menu* soft key takes you to the Bluetooth Settings screen, shown in the next image. From here, you can adjust Bluetooth settings, such as turning Bluetooth on or off and creating a Bluetooth partnership. See the following sections for more details.



Turn Bluetooth on and off

1. Tap Start > Settings > Connections tab.
2. Tap Bluetooth.
3. Select or clear the Turn on Bluetooth check box. Selecting it turns Bluetooth on; clearing it turns it off.

Note: *By default, Bluetooth is turned off. If you turn Bluetooth on and then suspend the device, Bluetooth turns off while MapSight is suspended to save battery power. When you resume (turn on) MapSight, Bluetooth turns on automatically.*

Make MapSight visible to another device

To allow other devices that use Bluetooth wireless technology to detect MapSight and communicate with it, you must make your device visible or establish a partnership with the other Bluetooth device.

Follow these steps to make your device discoverable:

1. Tap *Start* > *Settings* > Connections tab.
2. Tap *Bluetooth*.
3. Select the *Turn on Bluetooth* checkbox, and then select the checkbox to '*Make this device visible to other devices*'.

Tip: If you do not want MapSight to be visible to other devices, deselect (uncheck) the Make this device visible to other devices *checkbox.*

Create a Bluetooth partnership

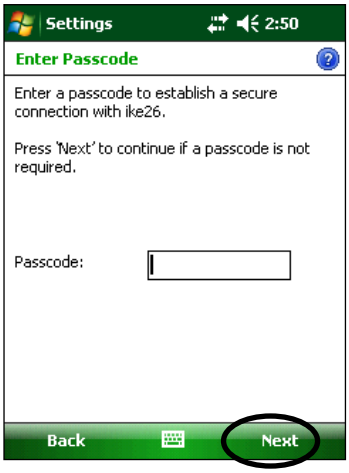
A partnership is a relationship you create between MapSight and another device that uses *Bluetooth* wireless technology to help exchange information securely.

Follow the steps below to create a partnership between MapSight and another device that uses *Bluetooth* technology:

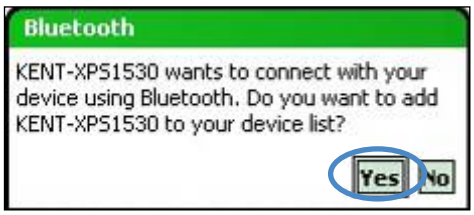
1. Make sure the two devices are turned on, discoverable, and within at least 30 feet of one another.
2. Tap *Start* > *Settings* and then tap the *Connections* tab.
3. Tap *Bluetooth* > *Devices* tab > *Add New Device*. Your device searches for other devices with Bluetooth capabilities and displays them in the list, as shown here.

4. The name of the Bluetooth device appears. Tap the name, then tap *Next*.
5. If the Bluetooth device has an assigned a passcode, enter the number. If the device has not already been assigned a passcode but requires one, enter an alphanumeric passcode on your MapSight between 1 and 16 characters in the Passcode option. Tap *Next*.

   Note: *If you are unsure whether your device requires a passcode and whether one has already been assigned to your Bluetooth device, see the user documentation that came with the device.*



Important: If the Bluetooth device does not use a Passcode, leave the Passcode field blank and tap *Next*, as shown in the previous image. A message appears, asking if you want to add the device to the device list. Choose *No* and skip to step 7.


Bluetooth
KENT-XPS1530 wants to connect with your device using Bluetooth. Do you want to add KENT-XPS1530 to your device list?
Yes
No

Note: *It is important to choose No when you are asked whether you want to add to the device to the device list; choosing Yes sends you back to the Passcode screen.*

6. Enter the same passcode on the other device.
7. In the Partnership Settings screen on MapSight, you can assign a new name to the device in the *Display Name* option.
8. Select the service you want to use from the Services box, then tap *Finish*.

Bluetooth virtual COM ports

Some application programs connect using a virtual COM port (serial port) when making a Bluetooth connection. To make a connection possible for such programs, you must first set up a virtual COM port on your MapSight. Once created, this virtual port can be used like any other COM port. For example, you can use a virtual COM port for programs that connect to a GPS receiver. You can also use it to connect to a printer that is enabled with Bluetooth technology.

When setting up a virtual COM port, you must specify if the COM port is an outgoing COM port or an incoming COM port.

- An outgoing COM port means that MapSight initiates communication with the other device. For example, when you are using a Bluetooth GPS receiver, MapSight initiates the request for data; thus, the virtual COM port connecting with the receiver would be an outgoing COM port.
- An incoming COM port means that the other device is initiating the communication with MapSight. For example, a desktop computer might initiate a Bluetooth ActiveSync connection with the device via the virtual COM port.

For more details about setting up outgoing and incoming COM Ports, read the following sections.

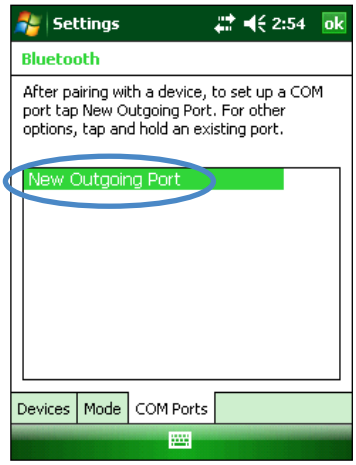
Set up an outgoing Bluetooth COM port

Use this option if you want to assign the virtual COM port as an outgoing COM port (i.e., you want to use MapSight to initiate communications with another device).

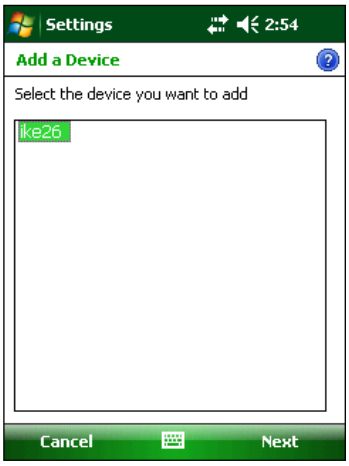
Follow the steps below to set up an outgoing Bluetooth COM port.

1. Make sure you have paired with the serial port device you want to communicate with. To do this, follow the steps in the section called *Create a Bluetooth partnership*.
2. Select the COM Ports tab.

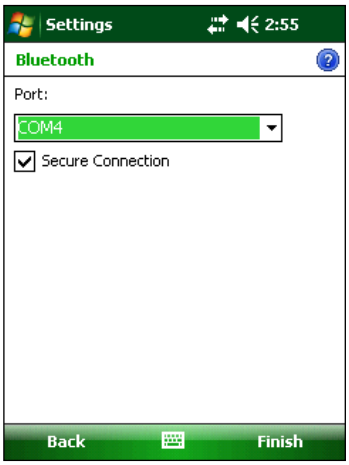
3. Tap *New Outgoing Port*, the first option.



4. The *Add a Device* screen appears. Tap on the name of the device you want to set up as an outgoing port, as shown in the following image.



5. Select a numbered COM port from the list of ports that appear. If the port cannot be created, it is in use. Select a different numbered port.



6. **Important:** Deselect the *Secure Connection* option below the list of COM ports, as shown above. Deselecting this option ensures that the device disconnects its Bluetooth connection only when you tell it to
7. Tap *Finish*

Once the virtual COM port is assigned using the outgoing Bluetooth COM port, specify the COM port assignment within your application as explained in the user documentation for the application. An example follows.

Suppose you are using a Bluetooth-enabled GPS receiver with the device and a navigation program on MapSight. In this example, assume you have set up a virtual COM port between your MapSight and the GPS receiver and that you assigned the outgoing COM port as COM 6.

To assign the COM port in your navigation program, you would then follow these steps:

1. Locate the place in the navigation program where the COM port is chosen.
2. Select COM Port 6 as the COM port for the Bluetooth GPS receiver.

Set up an incoming Bluetooth COM port

Use this option if you want to assign the virtual COM port as an Incoming COM port (i.e., you want another device to initiate communications with your MapSight). If you are connected with a Bluetooth device that supports serial communications, follow these steps to set up the incoming Bluetooth COM port:

1. Press the *COM Ports* tab.
2. Tap on *New Incoming Port.*
3. Select a numbered COM port from the list.

   Note: *If the port cannot be created, it is in use. Select a different numbered port.*

4. **Important:** Deselect (clear) the Secure *Connection* checkbox. Deselecting this option ensures that the device disconnects its Bluetooth connection only when you tell it to.
5. Tap *Finish*.

For more information about using Bluetooth to connect to other devices, see the next section, *Supported Bluetooth Profiles.*

Supported Bluetooth Profiles

This section describes the *Bluetooth* profiles recognized by the Microsoft drivers installed on your MapSight. Drivers determine which devices your MapSight can communicate with.

Note: *Bluetooth cards are not recognized by MapSight as it has an integrated Bluetooth module.*

This section is organized by Bluetooth profile, each of which is briefly described below. Instructions for using each profile to create Bluetooth partnerships follow.

- *Serial Port Profile (SPP).* Similar to a serial cable, this profile acts as a liaison between two devices, such as MapSight and a DGPS Beacon, using virtual ports. (These ports are described in the previous section.)
- *Dial-Up Networking (DUN).* Lets you connect to a computer through a cell phone or a Bluetooth-enabled modem.
- *Human Interface Device (HID).* Allows you to communicate between your MapSight and a Bluetooth keyboard or mouse.
- *Object Push Profile (OPP).* This profile lets you exchange files like data, audio, business cards, appointments, and contacts. Similar to the well-known object exchange profile (OBEX).

Serial Port Profile (SPP)

This section explains how to:

- Communicate with another device using the Serial Port Profile
- Configure ActiveSync to synchronize through the Serial Port Profile
- Connect to a desktop computer that has a Bluetooth dongle

- Print from MapSight to a Bluetooth printer using the Serial Port Profile

Communicating with another device using the Serial Port Profile

Follow the instructions below to communicate with a device using the Serial Port Profile.

1. On your MapSight, tap on the Wireless Manager icon to make sure Bluetooth is on and that your MapSight is discoverable. (For instructions on doing this, see the previous section.)
2. In the Wireless Manager, tap *Menu* > *Bluetooth Settings* > *Device tab* > *New partnership*.
3. Select your target device and tap *Next* to create a Bluetooth partnership with the target device.

   Note: *After you have created a partnership with a device, the device automatically appears in the list of Bluetooth devices. You do not have to re-create a device partnership.*
4. Enter the passkey on your MapSight and on the device. (See the documentation for the device for details. If there is no passkey listed for the device, tap Next, then No.)
5. On your MapSight, select *Serial Port* and tap *Finish*.
6. The device appears on the list of partnerships.
7. Choose the COM Ports tab. Choose *New Outgoing Port* and tap *Next*. Select a COM port that is available.
8. Important: Deselect (clear) the *Secure Connection* checkbox. Deselecting this option ensures that the device disconnects the Bluetooth connection only when you tell it to.
9. Tap *Finish* to save the settings. Tap *OK* and *Done* to close the Wireless Manager application.

Configuring ActiveSync on a Bluetooth-enabled desktop computer to synchronize through the Serial Port Profile

1. Make sure ActiveSync is set up properly on your desktop computer.
2. Make sure there are no current ActiveSync connections on your desktop.

   Note: *If another device is already connected to the desktop, serial ports do not appear available. To fix this, unplug the connected device, then tap Refresh on your MapSight.*
3. On the Today screen of your MapSight, tap on the Wireless Manager icon and make sure Bluetooth is on or discoverable.
4. Within Wireless Manager, select *Menu* then tap *Bluetooth Settings*.
5. Select the *Devices* tab.
6. Tap *New Partnership*.
7. Tap on the name of the desktop computer, then tap *Next*.
8. Enter a passkey on your MapSight.
9. Enter the same passkey on your desktop computer.
10. Select ActiveSync on your MapSight. If no ActiveSync option appears in the list of available services on your MapSight, check the ActiveSync configuration on your desktop.
11. Tap *Finish* to save the settings. Tap *OK* > *Done* to close the Wireless Manager application.
12. On your MapSight, tap *Start* > *Programs* > *ActiveSync*. Choose *Connect via Bluetooth*.

Connecting to a desktop computer using a Bluetooth dongle

1. Make your MapSight discoverable.
2. Select the COM Ports tab.
3. Choose New Outgoing Port.
4. Select the device and tap Next.
5. Select an available COM Port.
6. **Important:** Deselect (clear) the *Secure connection* option. Deselecting this option ensures that the device disconnects its Bluetooth connection only when you tell it to.

7. Tap *Finish* to save your settings.
8. On your desktop computer, right-click the Bluetooth icon on your menu bar.
9. Select *Add Bluetooth device*.
10. Select *Let me choose passkey*.
11. Type in a passkey.
12. On your MapSight, type in the same passkey.
13. Tap *Next*, *OK*, and *Done*.

Print from MapSight to a Bluetooth printer using the Serial Port Profile

Currently, no built-in Windows Mobile 6 application supports printers. However, you can use third-party printing programs such as PrintBoy® to print data from MapSight with a Bluetooth printer.

Before you set up a third-party print application, you need to first discover the Bluetooth printer. To do so, follow these steps:

1. On your MapSight, make sure Bluetooth is on and that your MapSight is discoverable. (See the previous section for instructions.)
2. In the Wireless Manager, tap *Menu* then *Bluetooth Settings*.
3. From the *Devices* tab, select *New partnership*.
4. When the printer appears on the list of devices, select it.
5. Tap *Next*.
6. Enter the passkey and tap *Next*.
7. Select *Serial Port*.
8. From the COM Ports tab, tap *New Outgoing port*.
9. Select the printer.
10. Tap *New COM port*.
11. Deselect the *Secure Connection* option.

You can now print using a third-party print application you install on your MapSight. For details about using the application to print, see the documentation that came with the application.

Dial-Up Networking (DUN) Profile

This profile allows you to connect to the Internet using a cell phone dial-up connection or cordless modem. Instructions for partnering with both device types are described below.

Connecting to the Internet using a cell phone dial-up connection

1. Make your cell phone discoverable. (See the user documentation that came with your cell phone for instructions.)
2. On your MapSight, tap on the Wireless Manager icon on the Today screen. (For more details, see the previous section.)
3. Tap *Menu* > *Bluetooth Settings*.
4. Select the *Turn on Bluetooth* checkbox and make sure *Make the device discoverable to other devices* is deselected.
5. In the Devices tab, choose *New Partnership*.
6. Select your cell phone from the list of devices and tap *Next*.
7. Enter any passkey on your MapSight.
8. Enter the same passkey and any other requested information on your cell phone.

9. On your MapSight, select *Dialup Networking*, then tap Next.
10. Tap *Start* > *Settings* > *Connections tab* > *Connections*.
11. Choose *Add a new modem connection*.
12. Enter a name for the connection and select Bluetooth as the modem.
13. Tap *Next*.
14. Select the name of your cell phone, then tap *Next*.
15. Enter the phone access number according to your phone carrier's specifications. Tap *Next*.
16. Enter a user name, password, and domain as specified by your network administrator.
17. Tap *Advanced*.
18. Fill in the remaining boxes as appropriate. Tap *OK* when you are done.
19. Tap *Finish*. Now you should be able to connect to the Internet on your MapSight through your phone's dialup connection.

Connecting to the Internet using a cordless modem

To connect to the Internet using a cordless modem, follow the steps below:

1. Tap on the Bluetooth icon on the Today screen to open Wireless Manager. Make sure Bluetooth is on. (See the previous section for details.)
2. Tap *Menu* > *Bluetooth Settings*.
3. In the Mode tab, make sure *Turn on Bluetooth* is selected and that *Make the device discoverable to other devices* is deselected.
4. Open the Devices tab and choose *New Partnership*.
5. When the cordless modem device is found, tap on it.
6. Enter the passkey.
7. In the Partnership Settings screen, make sure *Serial Port* is not selected and that *Dialup Networking* is selected.
8. Tap *Save*.
9. Tap once on the device name to select it.
10. Tap *Start* > *Settings* > *Connections* tab > *Connections*.
11. Choose *Add a new modem connection*.
12. Enter a name.
13. Select *Bluetooth* as the modem.
14. Tap *Next*.
15. Select the name of the modem and tap *Next*.
16. Enter your ISP number as provided by your ISP provider and tap *Next*.
17. Type in a user name and password.
18. Choose *Advanced*.
19. Change the baud rate to 115200.
20. Fill in the remaining boxes as appropriate. Click *OK* when you're done.
21. Tap *Finish*.

Now that you have established a dial-up network connection, you can check email or look at a webpage using one of two methods. The first method is to let an application do the work. (This option is especially useful with cell phones.) The second method is to do the work yourself. Instructions for each method follow.

Method 1: Use an internet browser or application

1. Open Internet Explorer.

2. Fill in the network login boxes.

Method 2: Do it yourself

1. From the Today screen, tap Start > Settings > Connections tab > Connections.
2. Choose Manage existing connections.

Tap and hold on a connection and choose *Connect* from the menu that appears.

Human Interface Device (HID) Profile

This profile allows you to connect with Human Interface Devices like Bluetooth keyboards and mice. To make a connection, follow these steps:

1. Make sure Bluetooth is on or discoverable. Create a Bluetooth partnership with the device. (See the previous section for instructions on how to do these tasks.)
2. Make sure the HID is ready for pairing and select *New Partnership* to search for a Bluetooth device.
3. Select the name of the HID and tap *Next*.
4. If the device has an assigned passkey or accepts a passkey you give it, enter the passkey on your MapSight and tap *Next*. If the device needs no passkey, leave the Passkey field blank, tap *Next,* and choose *No* when you are asked whether you want the device to be added to the device list.

   Note: *Saying* No *when you are asked whether you want to add the device to the device list allows you to proceed to the next screen; saying* Yes *returns you to the passkey screen.*
5. If appropriate, enter the same passkey on the HID to establish a partnership.
6. Select *Input Device*.
7. Tap *Finish*. You now have a partnership with the HID.

   Note: *If no partnership appears for the HID on the Devices tab screen, try resetting your MapSight.*

Object Push Profile (OPP or beaming)

Your MapSight uses Object Exchange File (OBEX) protocol to transfer or "push" electronic objects such as business cards from one Bluetooth-enabled device to another. For instructions, read on.

Transferring data from a Bluetooth-enabled device

To send data from a Bluetooth-enabled device to your MapSight, follow these steps:

1. Make sure your MapSight is discoverable. (See the previous section or the on-device help on your MapSight for instructions.)
2. On the Bluetooth-enabled device, tap and hold the stylus on the filename you want to beam. A menu appears.
3. Choose *Beam File*. The device finds your MapSight.
4. Send data from the device to your MapSight. Your MapSight receives the data.
5. To send data from your MapSight to a Bluetooth device, follow these steps:
6. Make sure the device is discoverable. (For instructions, see the user documentation that came with your device.)
7. On your MapSight, make sure Bluetooth is on. (See the previous section for instructions.)
8. In File Explorer, tap and hold on the name of the file you want to transfer, then choose *Beam File* from the menu that appears.
9. When the name of the device becomes visible, tap on the name.

10. On the Bluetooth device, accept the file. The file is transferred.